



# eXtreme Gammon Version 2

# Documentation

revision 1.01 (September 9th 2011)



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Welcome to eXtreme Gammon help. Use the following link to navigate to the section you're looking for, or use the content on the left of this window.

- [How to use the help](#)
- [Register eXtreme Gammon](#)
- [Rules of Backgammon](#)
- [Playing](#)
- [Transcribe a Game](#)
- [Analyzing](#)
- [Menus](#)
- [Dialog boxes](#)
- [Technical information](#)
- [Keyboard shortcuts](#)
- [Credits](#)
- [In Memoriam](#)
- [Glossary](#)

You can get a a PDF copy of the help file from [www.extremegammon.com/extremegammon2.pdf](http://www.extremegammon.com/extremegammon2.pdf)

# How to use the help

You can press the F1 key any time to access help. You will access help related to the dialog currently selected.

You can also use Shift+F1 or the Help icon in the window caption to see the "What's this" information about an item. The mouse cursor will change to a pointer with a question mark. Just click on area you want information about and a little hint window will give you a description.

You can get a a PDF copy of the help file from [www.extremegammon.com/extremegammon2.pdf](http://www.extremegammon.com/extremegammon2.pdf)

# Upgrading eXtreme Gammon

If you already own a copy of eXtreme Gammon version 1 you qualify for a discounted upgrade price to version 2.

You will retain the very same activation key as the one you have for version 1. If you have installed eXtreme Gammon 2 on a computer that you had version 1 installed on, it will find that key.

On the activation screen press "Activate". If you have already upgraded your activation code to be valid for version 2, your computer will be activated.

If you have not yet upgraded, the program will indicate to you that you have a version 1 activation and that you can purchase version 2 at the upgrade price. This will also send you to the web site.

Once there, your activation code should already be displayed. Pick your payment method and press next.

If you have more than 1 activation you will be sent to a page where you can specify how many of these activations you want to upgrade. If you decide to not upgrade all activations right away, you will not be penalized if you choose to do it later. The total price will be the same.

Once you finalize the payment return to eXtreme gammon and press activate again to complete the process.

Thanks for choosing eXtreme Gammon.



# Register eXtreme Gammon

You have a trial version that allows you to use the program for 14 days. After 14 days your version will be disabled and you'll need to register if you want to continue using the software.

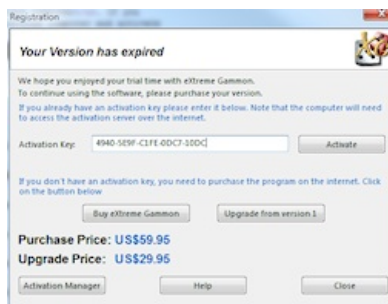
When you register you will receive an activation key. It will look like this: 4940-5E9F-C1FE-0DC7-10DC

Depending on the option you pick this activation key will allow you to activate one or more computers.

Note that each activation is linked to one unique computer. If you change computer you will need to deactivate your previous computer and activate the new one (see Activation Manager below)

**IMPORTANT:** Do not give out your activation key. Anyone else who uses your key to will be able to deactivate any of your computers. This will prevent you from using eXtreme Gammon.

GameSite 2000 Ltd. reserves the right to void any activation key in case of improper use.



If you have an activation key, just enter it in the area and press "Activate"

Otherwise you need to purchase the program from our web site [www.extremegammon.com](http://www.extremegammon.com) .

## Register on the Web

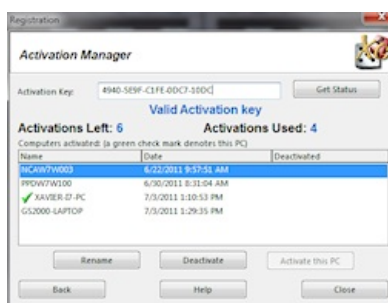
Just follow the instructions on the web page. You will be issued an activation key such as 4940-5E9F-C1FE-0DC7-10DC

Enter it in eXtreme Gammon and press "Activate".

**Note:** eXtreme Gammon will need to access the activation server so make sure your firewall does not prevent the program from connecting to the internet.

## The Activation Manager

The Activation Manager allows you to manage the activations you purchased. It also allows you to move your activation to a new PC.



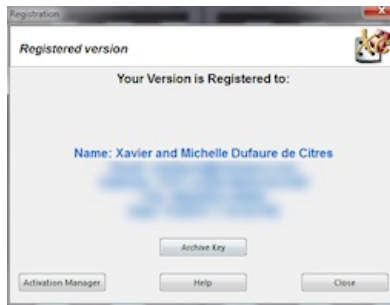
The Activation Manager displays the list of computers you have activated. You can deactivate any of the computers, but be aware that you will not be able to activate that computer for 24 hours. It displays how many activations you have used and how many remain.

For your convenience you can rename every activation. By default the activation uses the computer name.

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## Archiving the key

Once you receive your key you need to enter it.



Click on the Archive Key Button to save the key to any location you wish. Note that if you uninstall, you will be given the option to archive the key.

# Backgammon Rules

## Content

- [Description](#)
- [Moving the checkers](#)
- [Double](#)
- [Hit](#)
- [Bear-off](#)
- [Score](#)
- [Cube](#)
- [Match Play](#)
- [Crawford Rule](#)
- [Jacoby Rule](#)
- [Beaver and Raccoon](#)
- [Variations](#)

## Description



Backgammon is played on a board made of 24 points. Each player has 15 checkers (usually white and black, or white and red). The points represent the spaces where the checkers can be moved. The board is separated in its middle by the bar. When a checker is hit, it is put on the bar.



The goal of Backgammon is to be the first player to bear off all your 15 checkers. Players take turns rolling the dice and moving their checkers. The player who starts is chosen randomly at the beginning of each game.

At the beginning of his turn, the player rolls 2 dice. He can then move his checkers according to the rules below. Note: Doubles thrown on the first roll are discarded and the dice re-rolled.

## Moving the checkers



The picture below shows the way the checkers move around the board. Note: The 2 players move in opposite direction.

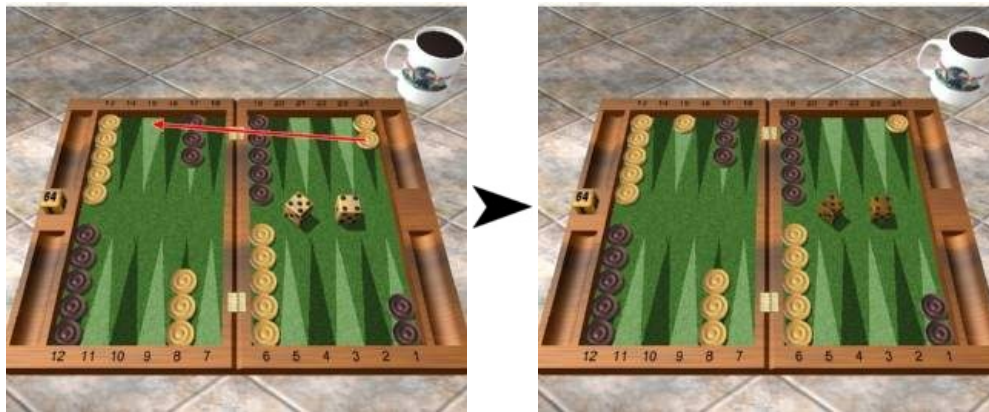


The dice are to be played individually, in any order. To move a checker using a die, move it the number of points shown by the die. A checker can not be moved to a point occupied by 2 or more of the opponent's checkers. Once the 1st die is played, the second one can be played. This completes the turn and the other player's turn begins.

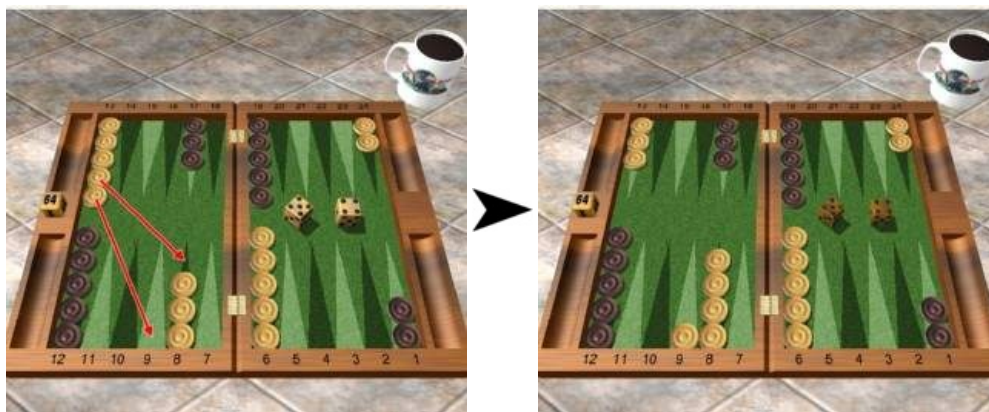
For example, in the initial position White rolls 5-4

It can move one of the 2 back men using the 4 (not using the 5 first as the point is occupied by more than 2 of the opponents men).

It can then continue moving this same checker using the 5 (as shown below) or move a different one.



Another choice is the move 2 checkers from the 13th point as shown below



Some restrictions apply to the moves:

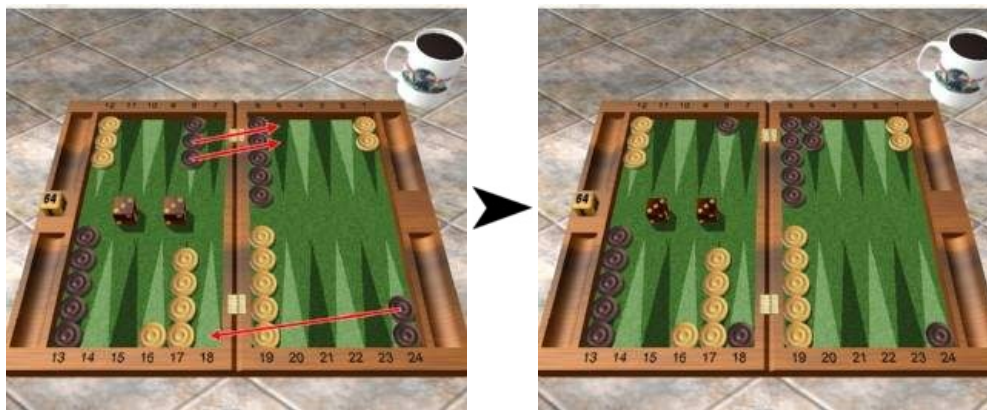
- If both dice can be played, the player must do so.
- If only one of the die can be played, the player must play the highest one if it's possible.

## Double




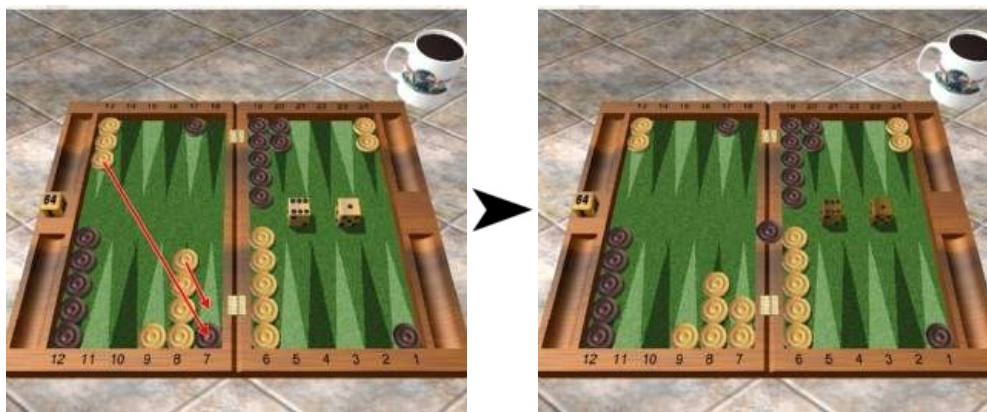
When a player rolls a double (both dice having the same value), the player must move 4 times.

For example Black rolls 3-3. it can move as shown below:

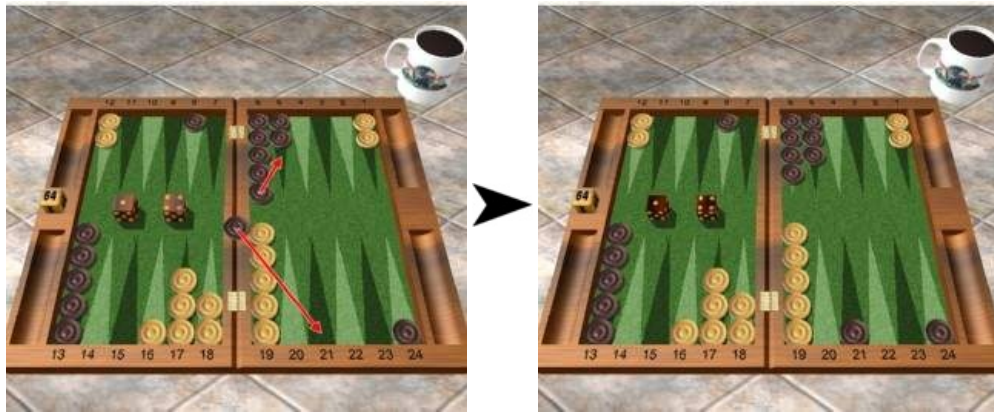


## Hit

When a checker moves on a point occupied by only one opponent checker, this checker is hit and moves on the central bar. 

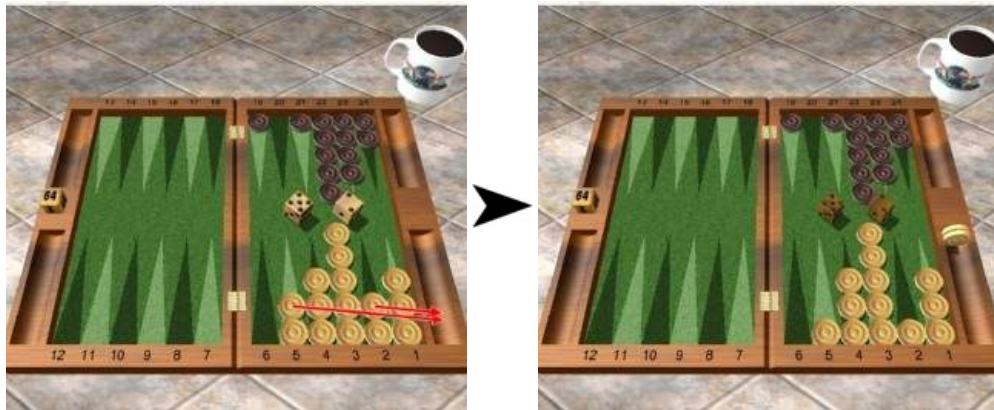


A player with checkers on the bar must enter them first before moving any other checkers. To enter a checker move it like if it was right outside the board. For example, Black rolls 4-1 and enters his checker from the bar using the 4 to the 21 point. he could have also enter in 24 using the 1.



## Bear off

When ALL of a player's checkers are on his last 6 points, he can bear off. To bear off, you have to reach an imaginary ▲ point located just outside of the board. To bear off one man, you need the exact number to remove it. This means that to bear off a man on the 3 point, you need to roll a 3. There is one exception to this rule: The farthest men can always bear-off, even if the number rolled is greater than the checker position. In the position below, if White rolls a 6, it can bear off the checker from the 5 point.



## Score

Usually, the player who bears off all his men first, wins 1 point. You can win more on some occasions: ▲

- If the opponent did not bear off a single man, the player wins a Gammon and 2 points.
- If the opponent did not bear off a single man AND has at least one checker on the bar or on one of his opponent's last 6 points, then the player wins a Backgammon and 3 points.

## Cube

The cube is a die marked with the value 2,4,8,16,32 and 64. It shows the value of the current game. ▲

At the beginning of the game the value is 1 and the cube is positioned in the middle of the board. At any point if, say, Player A thinks that he has an advantage, he can propose a double to Player B thus doubling the value of the game. The player wishing to double can only do so when it is his turn AND before he rolls the dice.

Player B has 2 choices:

- Refuse the proposition: the game ends, and Player A, who doubled, wins the current value of the cube.
- Accept the proposition: the game continues. The cube is turned to show 2 and placed on Player B's side. Now only Player B can decide to use the cube. If Player B decides later to double, Player A will have the choice to refuse and lose 2 points or continue with the cube at 4 where it will now be placed on Player A's side.

When a player wins a gammon, he wins twice the value of the cube; for a backgammon, he will win 3 times the value of the cube.

Note: you can not double on the very first roll.

## Match play

Backgammon is often played in "Matches". In a match, the aim is to reach a determined score (usually an odd number of points).

**IMPORTANT NOTE:** In any match, the final score does not matter when calculating ELO--you receive the same amount of ELO points whether you win a 5 point match **8 to 0** or **5 to 4**.

This means that when playing a 1 point match, gammons do not matter because the ELO calculation is based upon the contract of a 1 point match.

Doubling is not allowed as it would make no sense to double since that match was contracted for only one point.

## Crawford

The Crawford rule is almost always used in match play. The Crawford rule states that when any player is only one point from winning the match, the next game will be played without any player being allowed to double.

For example in 5 point match:

	Score	Cube actions	Outcome
Game 1	0-0	Cube allowed in Game 1	Player 1 wins 2 pt
Game 2	2-0	Cube allowed in Game 2	Player 1 wins 2 pt
Game 3	4-0	CRAWFORD GAME Doubling <b>is not</b> allowed	Player 1 loses 1pt
Games 4	4-1	POST CRAWFORD GAME Doubling <b>is</b> allowed	Player 1 loses 2pt
Games 5	4-3	POST CRAWFORD GAME Doubling <b>is</b> allowed	Player 1 wins 2pt
	6-3		Player 1 wins the match

Note: In game 4 and 5, player 2 should double as soon as possible because he has nothing to lose (remember, that it's the same ELO loss whether you lose 6-1 or 5-1).

## Jacoby

The Jacoby rule is used only when not playing a match (this kind of game is called unlimited or unlimited games).

When using the Jacoby rule, no player can score a gammon or backgammon if the cube is still at its initial value.

## Beaver and Raccoon



Like the Jacoby rules, Beaver and Raccoon are not used in match.



When a player doubles the opponent has a 3rd choice: it can accept the cube "Beaver". It means the player redoubles immediately but still keep the ownership of the cube. The player who initially doubled can refuse the beaver and lose 2 points, accept it and the game continue with a cube at 4 (own by the 2nd player) or even "raccoon" and proposed again to double the cube to 8!

Beaver and Raccoon are gambling tools.

## Variations



The rules of the game are the same--only the initial position changes.

Description	Starting Position
<p><b>NackGammon:</b> This variation has been created by Nack Ballard. It involves much more strategy. Back games are more frequent in this variation.</p>	
<p><b>HyperGammon:</b> It is played with only 3 checkers. The game is highly tactical. Gammon are scored if a player did not bear off any of his 3 checkers.</p> <p>Jacoby rule is commonly used even in match.</p> <p>This variation is not included in eXtreme Gammon</p>	



**LongGammon:** The strategy in this variation is very different from backgammon. Generally, it is best to try to establish a prime in your opponent's outer board.

This variation is not included in eXtreme Gammon



# Simple mode / Expert mode

eXtreme Gammon can display analysis results in simple or expert mode.

In order to make good use of the expert mode you need to understand the concept of equity.

Here are some examples:

- In a 5 point match, with a score of 0-0, you rolled a double 2 in the following position:



Here is how the result is displayed in the different modes:

## Simple Mode



## Expert mode



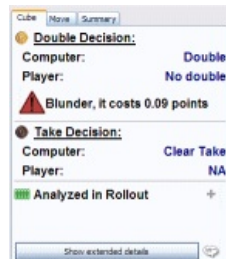
You play 24/20(2) which is a mistake, 24/22(2) 13/11 7/5 is actually better.

- In a unlimited games, no Jacoby, you reach the following position:



Here is how the result is displayed in the different modes:

## Simple Mode



## Expert mode



You don't double, but you should have.

# Playing

- [How to play](#)
- [Tool Bars](#)
- [Tutor Mode](#)

# Playing

eXtreme Gammon offers a very easy way to move checkers.

## Moving checkers

When the dice are rolled the active dice are displayed on the left (by default it is also the highest dice rolled).

To move a checker simply click on point you want to move from and the checker will be moved using the active dice.



To change which dice is active right click anywhere or left click on the dice.

There are a few shortcut you can use also:

- Press and hold the CTRL key to move the checker using both dice.
- To built a point, double click on it.

The dice you have played become dimmed and you can play the other dice the same way.



## Confirm or cancel

When you have played both dice you can either cancel your move or confirm it.

There are several way to cancel your move:

- Right click anywhere
- Use the Undo icon in the toolbar
- Use the menu Action/Cancel move
- Use the shortcut CTRL+Z

If you are happy with your move you can confirm it by clicking on the dice.



## Rolling the dice and doubling

When it is your turn to roll you can roll the dice by clicking anywhere on the board (except on the cube).

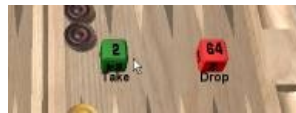
If you elect to double you can do it as follow:

- Click on the cube on the board
- Click on the cube icon on the toolbar
- Use the menu Action/Double
- Use the shortcut CTRL+D



## Taking

When your opponent doubles, you will see the 2 cube displayed on the board : The one shown on the left is for take, on the one the right is for drop. Click on either cube to make your decision.

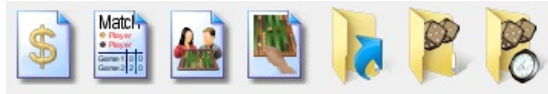


Note: If you play in unlimited games and allow beavers, a third cube will be displayed in between the Take and Drop cubes.

# Tool Bars

Tool bars allow you to access the main feature of eXtreme Gammon. There are 4 different tool bars:

## When no games are loaded



- New Unlimited games: In unlimited games you play as many games as you wish. The score accumulates as the game progresses (See: [Starting a game](#) for more information)
- New Match: Matches are usually a odd number of points. The longest match you can play in eXtreme Gammon is 51 points (See: [Starting a game](#) for more information)
- **New transcription:** Transcription mode allows you to enter a game that you are watching or from a book (See: [Transcribing a game](#) for more information)
- New Position: You can manually set the checkers position, the cube, the dice to be played etc.. It allows you to analyze a particular position or start a game from the position entered (See: [Setup a position](#) for more information)
- Open a saved game: Allows you to reopen a saved game. If the game is still in progress it will bring you to the end of the game. Otherwise the game opens at the beginning and you can review it (see Game navigation)
- Import a game: Open a saved game from an online site (Such as the GameSite 2000 Online Backgammon site: GammonSite ([www.gammonSite.com](http://www.gammonSite.com)) )
- Import the last game: Open the last game you played online: It scans all of the known game folders to find the most recent game.

## When Playing



- Mode: You can quickly change the game mode from here (See: [Options/Game Mode](#) for more information )
- Cancel Move: This option is available after you move at least part of the roll. Using that option will cancel all of the moves played with that roll.
- Ask Hint: This option is available when it is your turn and if you are not in competition mode. Using the menu will display the computer suggestion. The level used to make that suggestion can be changed in the option/game mode. The hint will be displayed in the analyze panel and also graphically on the board using arrows (for a checker move hint) or circle (for double or take action). If you wish to play the hint click again on the hint icon. Note that requesting a hint cancel the move you made if you have played part of the roll
- Double: This option is available before you roll. Using this will double the game. You can also directly click on the cube.
- Resign: This option allows you to resign the game. You can resign only when it's your turn to play. A dialogue box will pop asking you what kind of game you want to resign (single, gammon, backgammon or the entire match). The opponent then can decide to accept or refuse your resignation.
- Auto Finish game: This option is available when you are in a race. It will play all of the remaining moves for you.

The 3 small buttons on the right are (from top to bottom)

- Confirmation On/Off:

- On: You need to click on the dice once your move is finished in order to confirm it.
- Off: You have a small delay (delay can be changed in Options/Game) during which you can cancel your move by clicking either mouse button. Once this delay has expired the move is confirmed and sent.
- No Double On/Off: When checked, the dice will be rolled automatically even though you can double. The option will turn off at the end of each game.
- Sound On/Off: Turn the sound on or off

## When Reviewing



- Beginning of game: Go to the beginning of the current game
- Previous Move: Move to the previous decision (For instance if you are located on the move it will go to the previous double decision. If the player was not allowed to double, it will then go to the previous move)
- Next Move: Move to the next decision (For instance if you are located on the move it will go to the next double decision. If the player was not allowed to double, it will then go to the next move).
- End of game: Go to the end of the current game
- Previous Error: Move to the previous error from the current move displayed. If one player's errors are not displayed (using the pop up menu on the move list) the player's errors are skipped.
- Next Error: Move to the next error from the current move displayed. If one player's errors are not displayed (using the pop up menu on the move list) the player's errors are skipped.
- **Error Navigation Configuration:** Allows you to setup on which move the Previous/Next Error stops. See [Error Navigation](#) for more details
- Resume Game: Go to the end of the match (only displayed if the match is still in progress)
- Rematch: After completing a match, a different icon will replace the resume game icon. This is a rematch button. By pressing it you will start a new match with the same settings.

## When Setting up a position



- Change player: Inverts the player on roll
- Clear position: Clears the position, if the position is already cleared it resets the initial position
- Position Type: Can be checker play, double or take
- Game Type: Choose between match and unlimited games
- Crawford: Checks if the Crawford rule applies (only enabled in match when on player is one away)
- Match length and Score: Current match length and score of each player
- **Quick Score buttons**

# Tutor Mode

## Using the Tutor Mode

The Tutor Mode is a very convenient way to improve your backgammon skills. When you are in tutor mode you play normally but after each decision the computer will warn you if ever it thinks your move is incorrect: This dialogue will pop:



You have several choices:

- See Hint: Cancel your move and let you see the computer's suggestion
- Reconsider: Cancel your move and you can try again to play a better move
- Play anyway: Play your move anyway
- Continue the Tutor mode: If you uncheck that box you will return to free mode and the tutor dialog will not show again

## Analyze and Statistics in Tutor Mode.

When you play in tutor mode the computer will store the analysis twice: One with the help of the tutor mode and one without.

The analysis with tutor help is based on the moves actually played even if they are the computer's suggestion. If you follow the computer's advice your rating will be very high.

The analysis without the tutor mode is based on the first move you attempted to play (if you make an error, reconsider your move and make a blunder, you will still be charged with only a mistake as this was your first choice).

The game or match summary windows also allows you to see the analysis with or without the tutor help. The profile windows also give you this ability.

The move list will display a **T** next to the move played if you used the tutor to change your move. A Green **T** shows an error, a Red **T** shows a blunder and a black **T** shows either a different choice (but not an error) or an outplay.



# Time settings

eXtreme Gammon allows you to play with the clock.

There are two basic time controls offered:

- Fischer: You start with a set amount of time, when you first move, your clock starts down. Upon completion of your move you are credited with a certain amount of seconds that are added to your clock.
- Bronstein: You start with a set amount of time, and a small amount of reserve time for each move. When you first move, your reserve time starts down, if it reaches 0 your main timer begins to count down.

Using the Fischer system you can actually build up your timer if you play fast.

You can define the following parameters

- Base Time: Amount of time you start with. If the "Clock is reset after each game" is unchecked and you play a match, the starting amount is multiplied by the match length.
- Time per move:
  - Fischer time control: Time added to your clock upon completion of the move
  - Bronstein time control: The reserve time you start with for each move.
- Clock is reset after each game: (Match play only)
  - If checked the clock will reset to the base time at the beginning of each game
  - If unchecked the clock will not be changed from one game to another
- Penalty for running out of time: the number of point you lose if your time runs out.

The standard ABT setting is to use Bronstein Clock, with 2 minutes per match point and 12 seconds reserve. Running out of time causes you to lose the game.

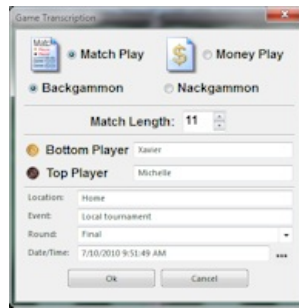
**IMPORTANT:** When playing against the computer, the computer will never be penalized for running out of time.

If you use a "Penalty for running out of time" that is not the entire match. The player who loses based on time loses that number of points. The player's clock is credited with half of the initial time and the game continues (with the same position).

However, if the time penalty causes the other player to be one away from victory, the cube is frozen for the remainder of the game: No player can double. If the player who lost on time won the game, the next game will still be a Crawford game.

# Transcribe a Game

Transcribing game allows you to easily enter a game from a book, a game transcription or from a live event.



Set the Game Type:

- **Match Play:** You need to enter the match length
- **Unlimited games:** You can set the following options:
  - **Jacoby:** When in use, the Jacoby rule specifies that no gammon can be scored unless the cube has been used once
  - **Beaver:** When used, a player has the ability to beaver an opponent's double if he estimate he is a favorite.

Set the Variation:

- [Backgammon](#)
- [Nackgammon](#)

During a game transcription both players are controlled by the user and the dice are set as manual.

A new menu will appear called "Transcription", it allows you to access the specific features used during transcription.

- **Enter Illegal Move (Shortcut: I):** Enabled when the dice are rolled. A dialog opens and you need to type the move you want to play. For instance in the opening position if you rolled 4-1 you can enter "8/5 6/5 24/23". The move entered needs to be possible, so you can only move from a point having a checker of the active player. In the above example "8/6 23/22" is not valid as there is no checker on the 23rd point. To enter the bar use "bar" or "25", to move off use "off" or "0".
- **Take back move (Shortcut: T):** After confirmation, it cancels the last move played.
- **Help (shortcut H):** Display help for the current move.
- **Random Dice (shortcut R):** Roll a set of random dice.
- **Fan (shortcut F):** If the player is on the bar using that option automatically picks a roll that make the player fan.
- **Start Next Game:** Start a new game with a different score
- **Change Score:** Change the current game score.
- **Edit Position (Shortcut E):** This option allows you to enter the edit mode. Press "E" again to exit. You can modify the position (see the [setup](#) help). You cannot modify the score from here.

Here are a few tips:

- If you entered the incorrect dice, just type the dice again
- When the move is finished, typing any number between 1 and 6 will validate the move, and roll the next dice (skipping the double action).
- If you ask for help on a move you can double click on a move in the analyze list to play that move.
- If you are broadcasting the game, you can display the game information in a more visible way from the menu "Layout/Broadcast Banner"



# Analyzing

- [Analyze Panel Expert mode](#)
- [Analyze Panel Simple mode](#)
- [Analyze Level](#)
- [How to use the analyze](#)
- [How to improve your game with eXtreme Gammon](#)
- [Performance](#)
- [Setting up a position](#)
- [Online Servers](#)
- [Play for Real Money](#)

# Computer and Analyze Levels

## Computer player

When playing against the computer you can pick the strength of your opponent. Of course the faster the computer analyzes, the lower its level is.

Here is a description of the different levels available

Player name	Evaluation level	Speed compare to 3-ply	Estimated XG elo
XG Roller +++	Variance Reduction Rollout truncated at 7 ply using 2-ply and 3-ply	450 times slower	2264
XG Roller +	Variance Reduction Rollout truncated at 7 ply using 1-ply and 2-ply	45 times slower	2262
XG Roller	Rollout truncated at 6 ply	6 times slower	2255
eXtreme Gammon	3 ply		2254
Champion	3 ply Reduction (sampling)	2 times faster	2249
Professional	2 ply	6 times faster	2228
Expert	1 ply	Immediate	2201
Advanced	1 ply with very little noise	Immediate	1935
Intermediate	1 ply with little noise	Immediate	1780
Beginner	1 ply with noise	Immediate	1600
Distracted	1 ply with huge noise	Immediate	1435

## Analyze level

When analyzing a game you can pick the level at which the analysis will be performed. The faster the analysis, the less accurate the evaluation.

Analyze can be performed in one pass or two. The level used for the second pass is always stronger than the one in the first pass. The second pass will be triggered if the computer choice in the first pass is different than the player's. You can defined how the program will react depending if the first pass thinks the player's choice is an error, a blunder, an outplay, or is just different.

There are 5 preset analyze levels and you can [customize 4 more to your convenience](#).

Here is a description of the preset ones

Name	1st pass	2nd pass	Speed	Comment
Very quick	2 ply	None	Immediate	Very convenient for have a very quick look to the match. A whole match can be analyzed in less than one second. Though the computer might incorrectly flag you with errors or miss other mistakes.
Fast	2 ply	3 ply on error or any cube difference	very Fast	A very useful mode, especially if the players are good as the chances that both the 1 ply evaluation and the player will both miss a move are small.
Deep	3 ply	None	Fast	Probably the best compromise between an accurate analysis and the time spent to analyze.
Thorough	3 ply	XG Roller on error or any cube	Slow	Use this one if you are a good player and can afford to wait to see the analyze result

		difference		see the analyze result
World Class	4 ply	XG Roller+ on error or any cube difference	Long	Use this one if you are a very good player and you can afford to wait to see the analyze result
Extensive	3 ply	XG Roller on differences and outplay Rollout on errors	Very long	If time is not an issue this is the most accurate one, but realize the analysis might take a couple of hours.

# Analyze Panel - Expert Mode

The analyze panel display the result of the analysis. Click here to see the [Simple mode](#) display

## Move List

41: 13/8	Move error
3)  63: 9/3 6/3	Move blunder
21: 13/11 12/11	Move outplay
2)  44: Bar/21 13/9 8/4(2)	Bottom player got a lucky roll
52: Bar/20 8/6	Top player got a lucky roll
Double/Take	Player doubled
5)  64: 8/2 6/2	Double blunder (the icon will be red for a blunder, green for an error and white for an outplay)
Double/Take	Take blunder (the icon will be red for a blunder, green for an error and white for an outplay)
Double/Drop	A double outplay and a take blunder
? 52: Bar/18	Move not yet analyzed
8)  41: 11/7 8/7	A <a href="#">comment</a> is attached to this move.
7)  53: 13/8 6/3	The move is marked to be rolled later (see <a href="#">batch rollout</a> )
8)  42: 10/4	The move was marked to be rolled later and the rollout is completed (see <a href="#">batch rollout</a> )
42: 8/4 6/4	The move has been flagged (this has no functional effect, use it if you want to easily find back a move)

## Cube Tab



1. Indicates the decision eXtreme Gammon recommends
2. Player decision
3. Level in which the cube action has been analyzed
4. Winning chances (G shows the gammon chances, B the backgammon chances)
5. Cubeless equity
6. Evaluate the cube action at a particular ply depth
7. Cubefull equities for the different possible actions
8. Difference of equities between different possible actions and the recommended decision
9. Clear text of eXtreme Gammon recommendation for both players

Click the comment button to add a comment (see the [comments section](#) for more)

## Move Tab



1. Indicates the move eXtreme Gammon recommends
2. Player choice
3. Level in which the move has been analyzed
4. Moves description
5. Winning chances
6. Choose if you see the initial position, arrows showing the move selected, or the final position
7. Equity of the move
8. Difference of equities between eXtreme Gammon's choice and the player's
9. Evaluate the selected moves at a particular ply depth

Click the comment button to add a comment (see the [comments section](#) for more)

## Summary Tab

Summary	
Xavier	eXtremeGammon
6 (2)	Errors (Blunders) 0
-5.96%	Cost 0.00%
0	Doubles (Blunders) 0
0.00%	Cost 0.00%
0	Takes (Blunders) 0
0.00%	Cost 0.00%
1	Outplay
-5.96%	Total Cost -0.04%
-52.4% (7)	Luck (Jokers) 52.4% (10)
World Class	World Champ
2126	Estimated Elo 2259

1. **Checker play:** Number of errors made. The number of blunders is in parenthesis. Below is displayed the equity lost
2. **Doubling Decisions:** Number of errors made, The number of blunders is in parenthesis. Below is displayed the equity lost
3. **Take Decisions :** Number of errors made, The number of blunders is in parenthesis. Below is displayed the equity lost
4. Number of outplays (checker and cube decisions)
5. Total equity lost
6. Options:
  - **Show Equity:** Display the total normalized equity lost from mistakes
  - **Show Cost:** Display either MWC or points lost from mistakes
  - **Show Per Move:** show Equity per decision lost from mistakes
  - **Show Current Game:** Display errors only in the current game
  - **Show Entire Match:** Display errors in the entire match
  - **With Tutor Help:** Display the error based on the move actually played
  - **Without Tutor Help:** Display the errors based on the first choice the player made.
7. Total Equity from luck and in parenthesis the number of jokers rolled
8. Level of play
9. Estimated ELO calculated from the level of play.



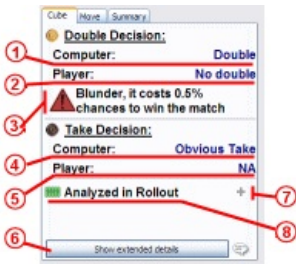
# Analyze Panel - Simple Mode

The analyze panel displays the result of the analysis. Click here to see the [expert mode](#) display

## Move List

● 41: 13/8	Move error
3) ● 63: 9/3 6/3	Move blunder
● 21: 13/11 12/11	Move Outplay
2) ● 44: Bar/21 13/9 8/4(2)	Bottom player got a lucky roll
● 52: Bar/20 8/6	Top player got a lucky roll
2 ● Double/Take	Player doubled
5) ● 64: 8/2 6/2	Double blunder (the icon will be red for a blunder, green for an error and white for an outplay)
2 ● Double/Take	Take blunder (the icon will be red for a blunder, green for an error and white for an outplay)
2 ● Double/Drop	A double outplay and a take blunder
● ? 52: Bar/18	Move not yet analyzed
8) ● 41: 11/7 8/7	A <a href="#">comment</a> is attached to this move.

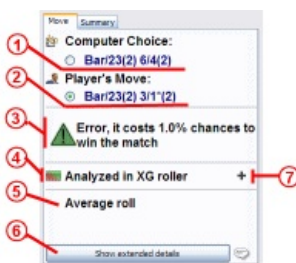
## Cube Tab



1. Indicates the **Double** decision eXtreme Gammon recommends
2. Player **Double** decision
3. This area displays the evaluation of the **Doubling** action.  
The player's **Double** choice can be characterized as an error, blunder, or outplay. Otherwise the **Double** action is either equivalent or the same as the computer choice.
4. Indicates the **Take** decision eXtreme Gammon recommends
5. This is the player's choice for the **Take** action.  
If the other player did not double it will show NA
6. Click here to see the [expert display](#) of the evaluation
7. Evaluate the cube action at a deeper level
8. Level of the analysis performed on that cube action.

Click the comment button to add a comment (see the [comments section](#) for more)

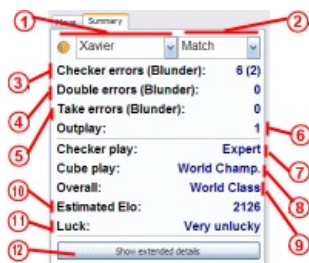
## Move Tab



1. Indicates the move eXtreme Gammon recommends
2. Player's choice
3. This area displays the evaluation of the **Move** action.  
The player's **Move** can be characterized as an error, blunder, or outplay. Otherwise the **Move** is either equivalent or the same as the computer choice.
4. Evaluates the cube action at a deeper level
5. Displays how much the roll was good for the bottom player.
6. Click here to see the [expert display](#) of the evaluation
7. Evaluates the selected move at a deeper level

Click the comment button to add a comment (see the [comments section](#) for more)

## Summary Tab



1. Select the player whose evaluation summary you want to see.
2. Select to see either the current game summary or the whole match summary.
3. Display the number of Checker Play errors and, in parenthesis, the number of blunders
4. Display the number of Doubling errors and, in parenthesis, the number of blunders
5. Display the number of Taking errors and, in parenthesis, the number of blunders
6. Display the number of Outplays.
7. Level of play for Checker play
8. Level of play for Cube action (both doubling and taking)
9. Overall level of play
10. Estimated ELO (using the ELO system selected in options)
11. Overall luck for the bottom player
12. Click here to see the [expert display](#) of the summary

# How to use eXtreme Gammon to improve your game

eXtreme Gammon is a very useful tool to improve your game. Here is some advice on how to get the most from the program.

## If you play online

Analyze all your games systematically. One of the things a program like eXtreme gammon does is dissociate the result from the game. You will see very quickly what will matter to you is not that you won the game or not, but that you played it well. So luck becomes a non issue.

When you analyze your games, review your mistakes. Try to understand why you made them. Most of the time errors are made not because you did not evaluate properly between move A and B but because you overlooked move C.

Once you have a few games analyzed, check your [profile](#). There is very useful information. For instance the detail page will show you if you doubled too early or if you miss a double. Try to take this information into account during your next game

## Use the tutor

The Tutor mode is an excellent tool. When the computer warns you, try to play again with the hint and find the best move.

[Click here to learn more about the Tutor Mode](#)

## Be fair with yourself

When you play a game, try not to not stop if things go wrong (either if you are losing or if you think you made too many mistakes). The analysis is for your eyes only so make it as representative as possible.

On the other hand you should hesitate when you play a game and get distracted by a phone call and miss an obvious double. Cancel the analysis on this error. Again, use it with fairness and cancel only when you are sure you would never have made that mistake if you would have been in the proper conditions and would not have been interrupted.

# How to use the analyze

## Let's make this simple

You might not be familiar with Backgammon mathematics. If that's the case then this chapter is for you.

The analysis generated by eXtreme Gammon revolves around equity. So, what's equity?

Equity is a way to quantify a position into a unique value. The higher the equity the better it is for the player. An equity of +1.000 mean you will win the game for sure. An equity of -1.000 mean you will lose the game for sure. Higher values than +1.000 indicate that there are gammon chances.

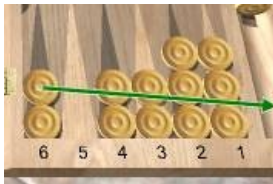
If the computer disagrees with your move, it will look at how much equity you have lost. For instance, if the position has an equity of 0.650 and the position resulting from the computer's choice has an equity of 0.680, your error is -0.030.

Here's a practical example. You are playing a one point match and reach the following position with a 5-1 to play:



The 5 must be played 6/1, and for the 1 you have two reasonable choices:

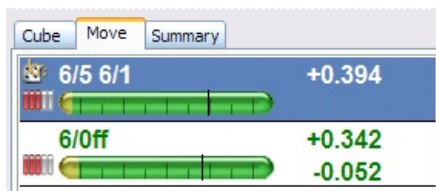
Bear off one checker with 1/off



Play 6/5



Now let see what the analyze panel shows:



You can see the move 6/5 6/1 has an equity of +0.394 while 6/off has only +0.342.

Why is that? The answer is that if you play 6/off your opponent will be able to hit you with a 6 but also if he rolls 5-1. But if you play 6/5 6/1, he can only hit with a 5.

The difference is 2 rolls (5-1 and 1-5) out of 36, or a 5.56% increase.

If you move your mouse over each move you will see the detail of the winning chances. In the 1st case, you have 69.68% chance to win the game. In the second case, 67.09% (the difference is not 5.56% because if you get hit you still have a small chance to win)

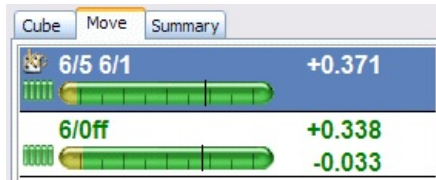
The mistake is -0.052, which will categorize it as an error (it's more than 0.020 but less than 0.080).



Let's say you are not convinced by the computer analysis and want to do a rollout. Select both moves and press the rollout icon.



After a few seconds the tab will show:



As you can see the equity slightly changed, but the rollout confirms that the error in is the 0.050 range.

## Categories

eXtreme Gammon quantifies a move using normalized equity. During the analysis the computer's choice is compared to the player's.

If the analysis is made in 2 pass and the computer's choice differs from the player's, then both choices are analyzed more deeply. Then the move can be characterized as such:

Case	Category
Computer choice is much better than the player's by more than a Blunder margin	Blunder
Computer choice is better than the player's by more than an Error margin	Error
Computer made a different choice than the player but the difference is less than the Error margin.	Different
Computer choice is the same as the player's	Same
Computer choice is lesser than the player's by more than the outplay margin	Outplay

The default setting for the margin is:

Margin	Value
Blunder	-0.080
Error	-0.020
Outplay	+0.010

If no gammon can be scored, and if the cube is not in use, then these margins represent a 4% chance to win the game for a blunder, 1% for an error and 0.5% for and outplay.

## What's an outplay and how can I get one?

One of the differences between eXtreme Gammon and some of the other backgammon programs is that eXtreme Gammon acknowledges its errors and credits you for them. In these cases, you will be credited with an outplay.

By default outplay are turned off. To enable them go to the menu Options>settings and check the box "Errors compare to XG" in the analysis tab

There are 2 cases that can result in an outplay.

- The computer did not think the move was worth analyzing further and discarded it. Had the computer analyzed further, it would have realized that the move was, in fact, better.
- You have made a 2 pass analysis and the computer, in the 1st pass level, played a move that when analyzed

deeper, proved to be a lesser move than yours.

The main interest of having outplays (besides being fair to the player and recognizing his superior move) is that it allows you to compare the player's level properly to the computer's. Analyzed performances are made by adding the errors (and the outplays) you made during the game. If the final amount is 0, you play at the same level as the computer. If you have a negative result, your Elo will be lower than the computer's. But if you manage to outplay the computer, then you will be credited with an ELO superior to that of the computer's.

Outplays can **only** be obtained if the first analyze pass is 3-ply or more.

## Cost compare to equity

The cost has different meanings depending on whether you are playing a match or unlimited games.

In unlimited games, the cost is the normalized equity errors multiplied by the cube value. In match play, it represents the amount of MWC (match winning chances) lost (or won).

For unlimited games, 50 ELO points are worth about 0.100 cost. This means that if a player is 200 ELO points better than his opponent, he can expect to win 0.400 points per game.

# Performance

How is the rating computed:

## 1. General

The rating of a player is determined by how much normalized equity the player loses per decision on average.

The overall rating after a match is calculated by dividing the sum of the equities lost by the number of decision the player made.

For instance if a player made one blunder of -0.105 in equity and one error of -0.035 after playing 13 moves his performance is  $0.140/13=0.0108$

## 2. Equivalence between performance and ELO

There is a roughly linear relation between ELO (GammonSite equivalent) and performance:

$$\text{ELO} = 2240 - \text{performance} * 16500$$

*Actually the ELO formula is more complex in order to take into account very bad performance and also performance when you outplay the computer.*

*The actual formula is result :=  $1/(1+\exp(-\text{performance}*40-1.12)) * 2000 + 732$*

In the previous case, the player played at a  $2240 - 0.0108 * 16500 = 2062$  ELO

## 3. Performance Rating (PR)

Performance rating express your performance using a easy to manipulate number.

$$\text{PR} = -\text{performance} * 500$$

It is independent of the ELO setting you are using.

## 4. Categories

Performance are categorize as follow:

Performance	Category Name	Color Code	ELO Equivalent	Performance Rating
P>+0.0000	Wow!	Underline Black	2240 and more	Less than 0.0
+0.0000>P>-0.0050	World Champ	Underline Black	2162-2240	0.0-2.5
-0.0050>P>-0.0100	World Class	Black	2077-2162	2.5-5.0
-0.0100>P>-0.0150	Expert	Black	1986-2077	5.0-7.5
-0.0150>P>-0.0250	Advanced	Green	1792-1986	7.5-12.5
-0.0250>P>-0.0350	Intermediate	Green	1593-1792	12.5-17.5
-0.0350>P>-0.0450	Casual	Black	1400-1593	17.5-22.5

-0.0550>P>- 0.0450	Casual Player	Red	1405-1593	17.5-22.5
-0.0450>P>- 0.0600	Beginner	Red	1167-1405	22.5-30.0
-0.0600>P	Distracted	Red	1167 and less	30.0 and more

## 5. Decisions

A decision is a checker move or a cube double that is considered non-obvious by the computer. Considered obvious are the following:

- A forced move
- A move for which the best choice and the worst choice have an equity difference of less than 0.001.
- A double action where the equity before doubling and after doubling is the same (optional double)
- A double action where the equity before doubling is 0.200 larger than the equity after the double (obvious non double)
- A double action where the equity before doubling is 0.200 larger than the equity after a drop (obvious too good to double)
- A double action where the equity before and after a double is very negative (This corresponds to a loss of position when trailing in the match by a lot)

Are never consider as a obvious:

- A double decision resulting in a double
- A take decision

## 6. Particular cases

### a) One pointer

One point match performance is calculated slightly different: A factor of 1.5 is applied to any error. This means that a move is considered a blunder if it is  $0.080/1.5=0.053$  different than the best move.

In the example given in paragraph 1 if the match was a one point match the performance would have been  $0.0108*1.5=0.0162$  and the ELO equivalence would have been: 1989.

This factor has been computed empirically from simulation and real games played on GammonSite

### b) NackGammon

Nackgammon games are typically longer (about 28% longer than regular games). They are also more complex. A ratio of 0.952 is apply to the equity.

This mean that a blunder threshold is 0.084 (rather than 0.080). Again using the example of paragraph 1, if the game would been a NackGammon one the performance would have been  $0.0108*0.952=0.0102$  for a ELO equivalent of 2081

### c) NackGammon in one pointer

Both ratios are applied giving a total ratio of 1.428



# Setup a position

Setting up a position allows you to enter any position you wish.

When entering setup mode the tool bar will change as shown below:



- Change player: Invert the player on roll
- Clear position: Clear the position, if the position is already cleared it resets the initial position
- Position Type: Can be checker play, double or take
- Game Type: Choose between match and unlimited games
- Crawford: Check if the Crawford rule applies. (only enabled in match when a player is one away)
- Match length and Score: Current match length and score of each player
- The button on the right (U, D, S, G) are shortcuts to import scores:
  - U: unlimited games
  - D: DMP or one point match
  - G: Gammon Save: the player on roll is 1 away, the opponent is 2 away and saving the gammon is paramount.
  - G: Gammon Go: the player on roll is 2 away, the opponent is 1 away and winning the gammon is paramount.

## Setting up the checkers

Setting the checkers is easy: Clicking on a point will add checkers. The higher you click on the point, the more checker will be added (for instance clicking on the very top of the point will add 5 checkers).

- A Left click add checkers for the bottom player
- A Right click add checkers for the top player

You can hold the mouse button down and move it over the board. For instance if you want to fill the home board points with 2 checkers, click on the 6 points and hold the button, move the mouse up or down until you have 2 checkers displayed. Then slide the mouse to the right over all the points. This will add these 2 checkers.

Note:

- If you want to empty a point, move the mouse outside of the board, under (or above for point on the top part of the board) the point.
- To add more than 5 checkers click and release on the 5th checker, each time it will add a checkers
- Keyboard shortcut:
  - + Add a checker of the same color, if the point is empty it adds a checker of the active player
  - - remove one checker
  - 0..9 put as many checkers of the active player.

## Setting up the cube

- A left click on the cube will move it toward the bottom player.
- A right click on the cube will move it toward the top player.

For instance, if the cube is centered:

- Left click: Sets the cube at 2 for bottom player
- Left click: Sets the cube at 4 for bottom player
- Right click: Sets the cube at 2 for bottom player

- Right click: Sets the cube at 1 and center it
- Right click: Sets the cube at 2 for top player

## Setting up the dice

When the dice are displayed you can:

- Left click on a die to increase it (if the die is 6 it will become 1)
- Right click on a die to decrease it (if the die is 1 it will become 6)

Set the game type

Using the tool bar you can choose to set the position as an unlimited game or match.

In the first case you can enter if the Jacoby rule is used and beavers are allowed.

For match you can enter the score of each player and the match length. You can also indicate if the Crawford rule is in use at that point of the match.

## Analyzing and playing the position

Once the position is set you can click on the analyze button on the analyze panel to see the computer analysis.

Note that switching from the cube panel to the move panel will change the position from the cube decision to a checker player decision.

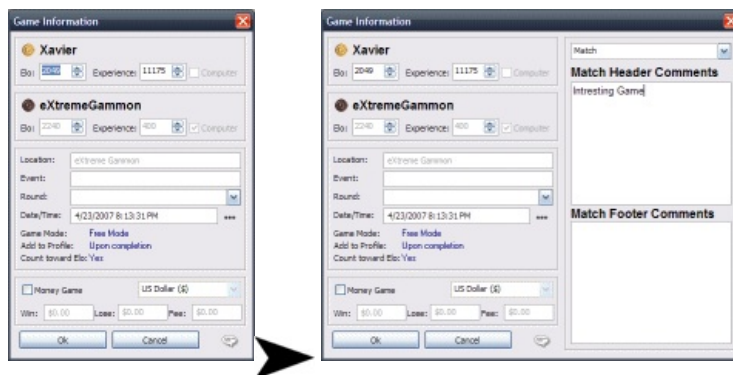
If you wish to play a game from this position use the menu [Setup/Play from position](#).

# Comments

Comments can be added to move decision, and cube action. Additionally, comments can be added to the beginning and end of each game and match.

## Game and Match comments

Use the [game information dialog](#) (menu Game/Game information)



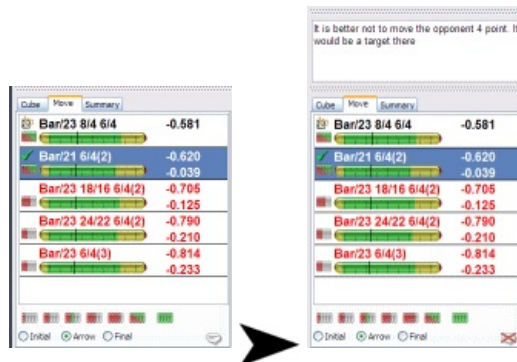
Click on the comment icon in the bottom right corner to expand the dialog and see the comment area.

Using the drop down, select the match or any of the games. Type the comment in the box.

Right click on the comment text area for additional formatting or to zoom on the comment (see below).

## Move and cube

To add a comment to a move or a cube, click on the comment icon in the bottom right corner



This will open the comment area. Type your comment there.

Right click on the comment text area for addition formatting or to zoom on the comment (see below).

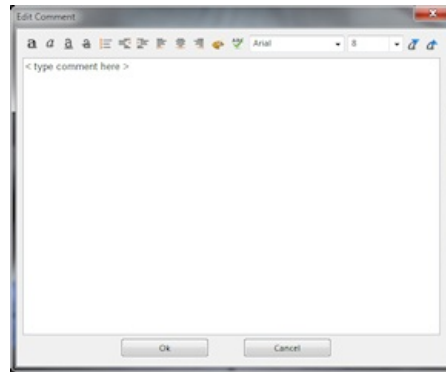
Use the following hot keys to insert a move in the comment

- Ctrl+Insert: Add the move selected
- Shift+Ctrl+Insert: Add the best move
- Alt+Ctrl+Insert: Add the move played

## Zoom

Using the right click pop up menu on any comment area gives you an option to zoom in on the comment.

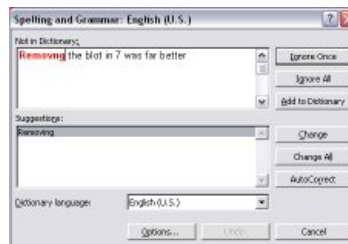
This opens a dialog for easier typing and formatting.



## Spell Checking

If Microsoft Word is present on your system you can check spelling and grammar on the comment.

This can be done using the right click pop up menu on any comment area and pick "Spell check" or using the spell check button in the comment has been zoomed.



Follow the instructions of Word to spell check. Check Microsoft Word for further information about using the spell checking.

Note: The first time you request spell checking it can take a few second to load Word.

# Online Servers

eXtreme Gammon allows you to import games from most of the online backgammon sites.

Depending on the site, some features can't be imported (for instance Gammon Empire does not store any information about ELO or Stake in their files).

For these sites you will need to enter the data manually once the game is imported using the [game information](#) dialog.

## ELO

Most, if not all, servers on the internet use the same ELO formula describe in the [ELO](#) page. However, player start at a different initial ELO on some servers. The ELO system also ranks a player amongst their peers on this server.

For example, let's assume a server with only 2 players with an ELO of 2000 and 1800. It starts new players at 1500. After playing to each other for a while they will end up with an ELO of 1600 and 1400 respectively. The ELO average of the site is 1500 which is the starting ELO. It also show that the players have a 200 ELO difference.

If a player's ELO is 2000 and joins another site where the starting ELO is 1600 and there is another player with an ELO of 1700, they will end up at 1800 and 1400 respectively. As before, it shows that the average of the site is 1600 and the ELO difference between the 2 players is 400.

As a result there is an ELO delta between sites that reflects both the starting ELO and the average strength of the player on the site.

## Multi import

Some sites store individual unlimited games in a separate file. If you select multiple files to import, they will be imported as one single eXtreme Gammon session.

## Site table

The following table shows the difference in the import of online games per site.

The "ELO Difference" is the delta value to convert ELO from eXtreme Gammon (or GammonSite) to other internet sites. For instance it shows that an ELO of 2000 on eXtreme Gammon is equivalent to 1820 on FIBS.

Site	ELO Difference	Multi import	Import ELO	Import Real Money information
GammonSite	+20	NA	Yes	Yes
FIBS	-180	No	No	NA
TrueMoney Games	NA	NA	NA	Yes
GamesGrid	-240	NA	Yes	Yes
NetGammon	-100	NA	Yes	NA
Gammon Empire/Play65	-250	Yes	No	No
Club Games	+40	No	No	No
PartyGammon	-320	Yes	Yes	Yes
XcitingGames	NA	NA	NA	Yes
BGRoom	NA	Yes	Yes	Yes

eXtreme Gammon allows you to pick which ELO system you want to use in the program. Check the [Options/main](#) setting for this option. All the ELO's will be displayed using that ELO system. Note that this is only influences the display

and you can switch to another ELO system at any time.

# Tracking Online Real Money Games

## 1. Basis

When playing for money, each game will be played for a predetermined amount. Also, the organization hosting will take a fee out of the game (also called Rake)

### a. Tournaments

In a tournament the fee is fixed and paid by the player to enter. The rest of the player money goes to the pot. The pot is then spread amongst the winners.

If the number of player is not 4,8,16,32 etc.. there will be 1st round bye.

### b. Private match

Private matches are played for a predetermined amount and fee. Some places use additive or subtractive fees:  
For a 3 point match, entry of \$10, and a fee of 5%

- Additive: The winner of the game get \$10. the loser loses \$10. The fee of  $\$10 \times 5\% = \$0.50$  is played by both players. So the winner net gain is \$9.50, the loser net lost is \$10.50.
- Subtractive: The \$0.50 of fee is removed from the bet so the game is played for \$9.50. The winner gets  $\$9.50 - 0.50 = \$9.00$  the loser loses \$10.00

### c. Unlimited games

These are played with an amount per point won. There are several way the fees are applied to this type of game.

- Percentage of the initial bet per game
- Percentage of the amount won per game
- Percentage of the amount won per Session

## 2. eXtreme Gammon money tracking

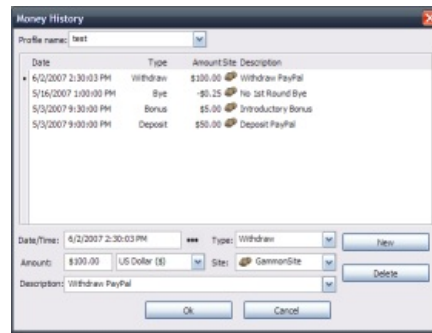
There are 2 places where you can track money: match and the money history.

### a. Match

Open the game information menu Game>Option), check the box "Money game"

Enter the amount for a win, lose and the fee. Most of the amount for a loss should be opposite for that of a win.

### b. Money history



The money history dialog (Profile>Money history) allows you to enter a transaction not related to a game. Each transaction contains:

- Date
- Type (see below)
- Amount and Currency
- The site the transaction applies
- A description

Type will control how the amount is aggregated in the profile:

- Deposit: Affects your balance on the site, typically a positive number
- Withdraw: Affects your balance on the site, typically a positive number
- Escrow: Move money to your escrow account (positive value) or out (negative value). The escrow account is money you have but cannot spend. For instance, you won a free entry in a tournament with an entry fee of \$50. Move this \$50 to your escrow account so your balance show the same as on the site. When the tournament starts, move the \$50 out of escrow and pay the normal entry for that tournament.
- Fee: Affects the total fee amount paid to the site and your net gain (typically positive)
- Bonus: Money given by promotion. Affects the total fee amount paid to the site and your net gain (typically positive)
- Luck: Affects only the total luck.
- Gain: Affects your net gain only (not luck). Used if a player forfeits a match against you.
- Missing: Affects your net gain and luck equally, use this type when you are missing a game.
- Bye: Tracks your byes in a tournament, If you have a 1st round bye the amount is positive, otherwise it will be negative.

Note you can bind the entry to a particular player (for reporting purposes) by typing in the beginning of the description *"player=<<Playername>> <<description>>"*

Notes:

- Use the "Missing" category to correct your balance
- The luck "category" should only be used if you want to enter a missing game where you think the luck was different than for a gain.
- You can use the "Fee" category to track banking fees related to money transfer. Just set the site as "unassigned".
- Closing an account: most sites allow only to transfer dollar, not cents. When you close your account you typically will have a remainder of less than a dollar. If you do not plan to use the site any longer, you should add a "fee" entry for the remaining money so that your balance shows \$0 (which is proper as the site will ultimately close your account and cash the remaining money)

Example of a Money history

Date	Type	Amount	Description
6/25/2006	Deposit	\$ 100.00	Initial deposit
6/25/2006	Bonus	\$ 5.00	Sign up bonus
6/26/2006	Bye	\$ 10.00	1st round bye



6/27/2006	Missing	\$ -19.00	Player=PlayerA (missing game)
6/27/2006	Fee	\$ -1.00	Player=PlayerA (missing game)
6/28/2006	Escrow	\$ 50.00	Win Qualifying tourney (7/2/2006)
6/28/2006	Bye	\$ -8.00	No 1st round bye
7/02/2006	Escrow	\$ -50.00	Free entry
7/05/2006	Withdraw	\$ 300.00	Closing account
7/05/2006	Fee	\$ 0.40	Closing account

### 3. Reporting

The Profile dialogue allows you to see Money information  
In the game type select "money" and it will show only games played for money.

Here is what change:

- Main page: Show your total net gain, balance, and total luck.
- Result Page: The \$ symbol next to an entry shows games where the bet is more than the average bet.
- Player Page: Shows the total luck and gross gain against that player. It also breaks down the gain and luck per match length
- Progression page: Two new options are available in the graph when the period is selected (week, month etc...): Total net gain and total luck.
- Report page: Everything is reported in \$ (or whichever currency you chose).

### 4. Notes

#### a. The winner pays the fee

Several sites explain that the winner is the one paying the fee as a courtesy to the loser. This is misleading even though it is not inaccurate.

Let's assume you play a \$10 game with a \$0.50 fee. The winner will get \$9 and the loser -\$10. In a way, yes, the winner pays both player's fee. But it would be a mistake to enter the game in eXtreme Gammon saying that it was a \$10 game with a \$1 fee. This is because you don't know at the beginning of the game if you will lose or win and pay a \$0 or \$1 of fee. The proper way to enter it is to say it's a \$9.50 game with a \$0.50 fee.

Long term consequences of entering games as 10/-10/1 for a win (win, lose, fee) and 10/-10/0 for a loss depends if you win more than 50% of your games. For a good player (winning more than 50%) the consequence is that it will report more fees paid than actual and more luck

Let's say you played 10 games and won 7, and lost 3.

- Reporting properly 9.50/-9.50/0.5 total to a net gain of  $9.50*7-9.50*3-0.5*10=\$33$ . The total fee is \$5. If both players played same strength the luck will be  $9.5*7-9.50*3=\$38$
- Reporting 10/-10/1 and 10/-10/0 will result in a total Fee of \$7, the net gain is still \$33.  
If both players played at the same strength, the luck will be  $10*7-10*3=\$40$

#### b. Money session fee based on score

In many sites, the fee is proportional to the final score. This has an actual effect on the game and changes slightly per taken point.

For instance you play at \$10 per point and the fee is 10% of the final score. Let's assume you play with a \$20 limit. Your opponent doubles you to 2. Normally your take point is %25, but here it is a bit different:

- If you drop you lose  $\$10+\$1(\text{Fee})=\$11$
- If you take and win you get  $\$20-\$2(\text{fee})=\$18$
- If you take and lose you lose  $\$20+\$2(\text{fee})=\$22$

Your take point P is

- $P*18-(1-P)*22 = -11$
- or  $18P-22+22P = -11$
- so  $40P=11$  and  $P=11/40=27.5\%$

eXtreme Gammon does not take that effect into account

**c. Tournaments**

Calculating the amount in play in each round of the tournament is rather complex. If the tourney involves bye it complexity the calculation even more.

Let look at an example:

- 12 players
- Entry fee is \$10 + \$1
- Pot is \$120 split \$80/\$40 between the winner and the finalist.

1. Byes: There are 8 players in round 1 and 4 with a bye. The 8 players in round 2 will play for \$120. It means it's equivalent to say each bring  $\$120/8=\$15$  to the table.  
Thus the value of a bye is \$5 ( $\$15-\$10$ )  
For the one not having a bye: If they lose they get  $-\$10$ , if they win they have  $+\$15$  (the value of reaching round 2), meaning that they gain \$5. So the average expectancy is  $(-10+5)/2=-2.5$ . That is the cost of not having a bye:  $-\$2.50$

Note that the total money from the bye is  $8*-2.50+4*5=0$ .

2. Round 1. For player in round 1: As stated above, losing is  $-\$10$  and winning is \$5. The difference between losing and winning is \$15 so they play for  $\$15/2=\$7.50$
3. Round 2. Each player has at that point \$15. The winner takes the \$15 from his opponent so the game is played for \$15
4. Round 3 (semi final). Each player has now \$30 and as stated above, the winner gets it all. So the game is played for \$30.
5. Round 4 (final). Both players now have \$60 but because the pot is split and the loser gets \$40, we can consider they both put aside \$40 and play for the remaining \$20.

Here are the entry's for a player reaching the final without a 1st round bye.

Round	Play for	Fee	Result	Net Gain
No Bye				-\$2.50
Round 1	+\$7.50	\$1.00	Win	+\$6.50
Round 2	+\$15.00			+\$15.00
Round 3	+\$30.00			+\$30.00
Round 4	+\$20.00			-\$20.00
Total		\$1.00		+\$29.00

The net gain is  $\$29=\$40(\text{win})-\$10(\text{entry})-\$1(\text{fee})$

For a player losing in Semi after having a bye:

Round	Play for	Fee	Result	Net Gain
Bye				-\$5.00
Round 2	+\$15.00	\$1.00		+\$15.00
Round 3	+\$30.00			-\$30.00
Total		\$1.00		-\$11.00

Formula:

- N is the number of players
- P is the pot, split as P(i) where i is the round a player lose
- E is the total entry paid

Description	Formula with byes	If there is no bye (N is a power of 2)
The Fee F is	$F = (P - N * E) / N$	$F = (P - N * E) / N$
The net entry fee is	$G = E - F$	$G = E - F$
The number of round R is	$R = \text{int}(\ln(N-1)/\ln(2)) + 1$	$R = \text{int}(\ln(N-1)/\ln(2)) + 1$
The number of bye NB is	$NB = (2^R - N)$	NA
Having a bye price is	$\text{bye} = P / (2^{(R-1)}) - G$	NA
Not having a bye cost is	$\text{no bye} = (Bye - E) / 2$	NA
Round 1 value is	$\text{Round1} = (Bye + E) / 2$	NA
Next round are	$\text{Round R} = (G + \text{bye})^{(R-1)} - P(R)$	$\text{Round R} = G^{(R-1)} - P(R)$

Note: added money tourney will appear with a Negative fee (hence a bonus)

#### d. league

It is extremely difficult to account for money in leagues. For instance in a 5 player league if you win 4 and lose 1 you are not sure of the outcome: you can lose the tournament (a player can be 5 and 0), you can have a tie or even win alone. It means that part of the outcome is totally unrelated to your games and can be considered (from your point of view) as pure luck.

One way to enter that is to use a chart that tells you the average amount expected at a given score. This assumes that all players are equal in strength. For instance, in a 5 player league 5-0 means you will win %100 of the pot, at 4-1 you are 80%, at 4-0 you are 90%

If you end up at 4-1 and win alone the tournament, cashing for instance \$100, you need to have had +\$10 "missing" to your history to account for the fact that you won 100% of the money rather than 90%. If you tie and cash \$50, enter -\$40 of "missing".

# Menus

- [File Menu](#)
- [Setup menu](#)
- [Transcribe menu](#)
- [Action Menu](#)
- [Batch Rollout Menu](#)
- [Game Menu](#)
- [Analyze Menu](#)
- [Player Menu](#)
- [Options Menu](#)
- [Layout Menu](#)
- [Windows Menu](#)
- [Help Menu](#)

## File Menu

The File Menu allows you to open, save, import games or position. Here is the complete description of the different entries.

<ul style="list-style-type: none"> <li>■ New       <ul style="list-style-type: none"> <li>■ Match</li> <li>■ Unlimited Games</li> <li>■ Setup Position</li> <li>■ Transcription</li> <li>■ Rematch</li> </ul> </li> <li>■ Open</li> <li>■ Recent Games</li> <li>■ Save</li> <li>■ Save As</li> <li>■ Close</li> <li>■ Import       <ul style="list-style-type: none"> <li>■ GammonSite</li> <li>■ Online site 1</li> <li>■ Online site 2</li> <li>■ ....</li> <li>■ GnuBG</li> <li>■ Jellyfish position</li> <li>■ Other</li> <li>■ Last Game Played</li> <li>■ Position from Text</li> <li>■ Position from Clipboard</li> <li>■ Batch import</li> </ul> </li> <li>■ Export       <ul style="list-style-type: none"> <li>■ Position to Clipboard (default)</li> <li>■ Position to Clipboard...</li> <li>■ XGID to Clipboard</li> <li>■ Position as XGP</li> <li>■ Position to File</li> <li>■ Image</li> <li>■ HTML</li> <li>■ JellyFish</li> </ul> </li> <li>■ Print position</li> <li>■ Quick Print</li> <li>■ Minimize in TaskBar</li> <li>■ Exit</li> </ul> <p style="text-align: center;">Click on a menu entry for its description</p>	<p><b>Start a New match.</b></p> <p>Matches are usually an odd number of points. The longest match you can play in eXtreme Gammon is 51 points</p> <p>See: <a href="#">Starting a game</a> for more information</p> <p><b>Start new unlimited games.</b></p> <p>In unlimited games you play as many game as you wish, the score accumulates as the game progresses.</p> <p>See: <a href="#">Starting a game</a> for more information</p> <p><b>Create a new position.</b></p> <p>You can manually set the checkers position, the cube, the dice to be played etc. It allows you to analyze a particular position or to start a game from the position entered.</p> <p>See: <a href="#">Setup a position</a> for more information</p> <p><b>Start a new transcription.</b></p> <p>Transcriptions allows you to input a game played by two humans that you are watching or have recorded.</p> <p>See: <a href="#">Transcribe a Game</a> for more information</p> <p><b>Open a saved Game.</b></p> <p>Allows you to reopen a saved game. If the game is still in progress it will bring you to the end of the game. Otherwise, the game opens at the beginning and you can review it (see <a href="#">Game navigation</a>)</p> <p><b>Open a recently saved Game.</b></p> <p>A sub menu opens with the last 10 games you opened or saved. Pick any of the menu entries to open the selected game. Note that the game opened will be moved to the top of the list</p> <p><b>Save the current Game.</b></p> <p>Save the game under the current name, It will overwrite the previous instance of that game.</p> <p>If you don't wish to overwrite the previous entry use "Save as".</p> <p>If the game as no name (For import game for instance) you will be prompted for a file name.</p> <p>By default games are saved in \My documents\ExtremeGammon\. You can change that location in the options.</p>
--	---

## Save the current Game with a different name.

Prompts you for the name to save the current game.

You will be warned if the file name you entered already exists and if you want to overwrite it or not.

By default games are saved in \My documents\ExtremeGammon\. You can change that location in the options.

## Close the current game

If the current game has not been saved it will prompt you to save it before closing

You can change that behavior in the option the following choice:

- **Automatically for all:** Automatically save any game opened without prompting
- **Automatically for Completed game:** Saves automatically the games that have been completed, but prompts you for games in progress
- **Always prompt when closing**
- **Prompt for unfinished game:** Prompts you to save the game if is still in progress. Close without saving completed game.
- **Never:** Always close the game without prompting and without saving

## Import a game From GammonSite or other online site

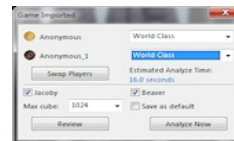
Open a save game from the GameSite 2000 Online Backgammon site: GammonSite ([www.gammonSite.com](http://www.gammonSite.com))

By default the open file dialogue will point to GammonSite\backgammon folder where the games are automatically saved.

GammonSite file are standard (Jellyfish) file with an extra header containing various information (tourney, round if available, Players ELO and experience etc...)

You can also import files from a variety of other online sites. Each site's path will be memorized.

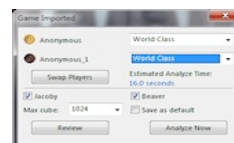
Once the import is made you can immediately start the analysis.



## Import the last game played

Open the last saved game from anywhere eXtreme Gammon can locate on your computer

Once the import is made you can immediately start the analysis



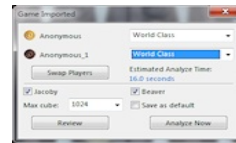
## Import Games from other sources than GammonSite.

Import Game from other online backgammon site. Available format are:

- JellyFish format,
- GamesGrid Games,
- Netgammon Games,
- TrueMonkey Games,
- PlayMaker Games,
- FIBS old move format.
- Gammon Empire
- BGRoom
- PartyGammon

See the [Server](#) section for more information

Once the import is made you can immediately start the analysis



## Import a Position from a file.

the file content should look like:

```
Score is X:0 O:0 5 pt(s) match.
+13-14-15-16-17-18-----19-20-21-22-23-24-+
|       |       |       |   |   |   |       | X |
|       |       |   O   |   |   |   |   O   | X |
|       |       |   O   |   |   |   |   O   |   |
|       |       |       |   |   |   |       |   |
|       |       |       |   |   |   |       |   |
|       |       |       |   |   |   |       |   |
|       |       |   BAR |   |   |   |       |   |
|       |       |       |   |   |   |       |   |
|       |       |       |   |   |   |       |   |
|   O   |       |   X   X |   |   |   X   |   |
|   O   |       |   X   X |   |   |   X   X   |   O |
|   O   |       |   X   X X |   |   |   X   X   |   O |
+12-11-10--9--8--7-----6--5--4--3--2--1-+
Pipcount X: 136 O: 146 X-O: 0-0/5 Cube : 1
O roll or double ?
```

## Import a position from the clipboard

Check the menu "From File" to see a sample of what the clipboard content should be. For example, you can use this option to import games posted in newsgroups.

## Save the Current Position

Save the current position in a separate file.

This does not change the name of the current game file. It does not interrupt the game neither.

This is a useful feature to save a position you may want to review later or send to someone else.

## Save an Image of the board

Save the current position in a Image file.

When save you can choose between JPG, GIF or BMP, and Large, Medium, Small Size

### Save the position to a file

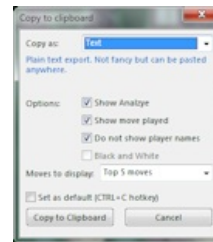
Save the current position in a text file.

Check the menu "Import/From file" for an example of the content of the file generated

### Save the position to the clipboard

Save the current position in the clipboard.

If not using the "Default" entry the following box opens

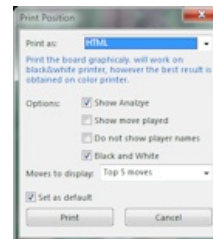


You can export as text or HTML and set several options

If you want the default setting (hotkey CTRL+C) check the box "Set as default"

It adds a game Identifier: XGID, click [here](#) for more info

### Print the position



You can print as text or HTML and set several options

### Save the XGID to the clipboard

Save the current position ID in the clipboard.

Click [here](#) for more info

### Save an the Match in JellyFish format

Save the whole match or unlimited games to a file in JellyFish format.

### Exit eXtreme Gammon

Exit the game. You will be prompted to save any opened game (check the menu Close for the different options for saving upon close).

### Export the position to HTML

This option allows you to export the game in HTML format. You can then use the HTML page generated to print or publish the match on a web site.



See: [Export as HTML](#) for more information

## Rematch

This option allows you to restart a match with the same settings as the last one played

## Minimize in the taskbar

When using that option eXtreme Gammon will minimize to the task bar. If an analyze is in progress, a little red dot will show you there is activity. Hover the mouse on the icon to see the overall analyze progress

## Batch Analyze

A Batch analyze allows you to import and analyze a large group of games and allows you to store the results in profiles.

See: [Batch analyze](#) for more information

## GnuBG

Import a game saved in GnuBG format (sgf). Note that it does not import the analyze

## Jellyfish Position

Import a position saved in Jellyfish format (pos).

## Quick Print

*Print the current position selected using the default setting and default printer.*

## Setup Menu

The Setup Menu is displayed only when in Setup Mode. It give you access to the setup features.

<ul style="list-style-type: none"> <li>■ <a href="#">Play from Position</a></li> <li>■ <a href="#">Transcribe from Position</a></li> <li>■ <a href="#">Invert Active Player</a></li> <li>■ <a href="#">Change players name</a></li> <li>■ <a href="#">Checker Play</a></li> <li>■ <a href="#">Cube Action</a></li> <li>■ <a href="#">Take Decision</a></li> <li>■ <a href="#">Switch Cube Pos</a></li> <li>■ <a href="#">Increase Cube</a></li> <li>■ <a href="#">Decrease Cube</a></li> <li>■ <a href="#">Clear Position</a></li> <li>■ <a href="#">Reset Position</a></li> <li>■ <a href="#">Maximum Cube Value</a></li> </ul> <p>Click on a menu entry for its description</p>	<p><b>Play from position</b></p> <p>Start playing from the current position. You will be prompted for the players name.</p> <p><b>Transcribe from position</b></p> <p>Start transcribing from the current position. You will be prompted for the players name.</p> <p>See: <a href="#">Transcribe a Game</a> for more information</p> <p><b>Invert Active Player</b></p> <p>Change the player who has to play (either double or move checkers).</p> <p><b>Change players name</b></p> <p>Change the player names.</p> <p><b>Checker play Position</b></p> <p>Set position as a checker play. The dice will be displayed on the board for the active player, click on the dice to change their value</p> <p><b>Double Decision Position</b></p> <p>Set position as a double decision. The dice will be displayed on the side of board for the active player.</p> <p><b>Take Decision Position</b></p> <p>Set position as a take decision. The dice will be displayed on the side of board for the active player and the cube will be shown for take/drop on the board.</p> <p><b>Switch Cube position</b></p> <p>Invert the player who has ownership of the cube. If the cube is centered, this options has no effect.</p> <p><b>Increase the Cube</b></p> <p>Increase the cube by a factor 2, the ownership of the cube doesn't change. If the cube is centered when using this action the cube will be owned by the active player</p> <p><b>Decrease the Cube</b></p> <p>Decrease the cube by a factor 2, the ownership of the cube doesn't change except if the cube value reaches 1. In that case the cube goes back to the center. This option has no effect if the cube is centered.</p> <p><b>Clear the position</b></p>
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Remove all checkers from the board

**Reset the position**

Reset all the checkers to their starting position.

**Maximum Cube Value**

Change the maximum value that the cube can reach.

## Action Menu

**The Action Menu Controls the actions you can perform during a game. Here is a complete description of the different entries.**

<ul style="list-style-type: none"> <li>■ Cancel Move</li> <li>■ Double</li> <li>■ Resign</li> <li>■ Settlement</li> <li>■ Get Hint</li> <li>■ Show Pip Count</li> <li>■ Pause Clock</li> <li>■</li> <li>■ Invert Player</li> <li>■ Change Player</li> <li>■ Swap Board</li> <li>■ Enter illegal move</li> <li>■ Play From Position</li> <li>■</li> <li>■ Finish Game</li> </ul> <p style="text-align: center;">Click on a menu entry for its description</p>	<p><b>Cancel the move.</b></p> <p>This option is available after you move at least part of the roll. Using this option will cancel all moves played with that roll.</p> <p>You can also right click anywhere on the board to cancel the move.</p> <p><b>Double the Game.</b></p> <p>This option is available before you roll. Using this menu will double the game. You can also click directly on the cube.</p> <p><b>Pause Clock.</b></p> <p>This option is available When you are playing with clock. Using the menu will stop the clock. To resume the clock use the menu again.</p> <p><b>Resign the Game.</b></p> <p>This option allows you to resign the game. You can resign only when it's your turn to play. A dialogue box will pop up asking you what kind of game you want to resign (single, gammon, backgammon or the whole match). The opponent can then decide to accept or refuse your resignation. eXtreme Gammon will always accept any resignation that enables it to win the match, regardless of gammon or backgammon. However, it will refuse single game resignations if it has even a 0.1% chance of winning a gammon.</p> <p>eXtreme Gammon will resign games that are a sure loss. When a gammon is meaningless, eXtreme Gammon will resign a gammon if it has at least a 5% chance to lose one; otherwise, it will resign a single game. You can decide to refuse the computer resignation. In this case, eXtreme Gammon will not resign again during that game.</p> <p><b>Propose a Settlement.</b></p> <p>This option is available only in unlimited games and if the cube has reached 8</p>
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or more.

You can propose to settle the game to avoid a big swing of points. For instance, in the following position:



You have 72.22% chance to win and should double to 16, The computer will accept because it has a more than 25% chance to win. The average points you will win is  $16 * 0.722 - 16 * 0.2778 = 7.110$ . If you would rather not take the chance of rolling a 1, you can propose to settle for 7 points.

Note: in this case, you will be charged with a small mistake of 0.0138 normalized equity ( $0.110/8$ ) because you gave up some equity.

eXtreme Gammon will not accept any settlement if it will lose more than 0.005 in equity (in the above example, it would have refused an 8 point settlement)

### Get a Hint.

This option is available when it is your turn and if you are not in Competition mode.

Using the menu will display the computer suggestion. The level used to make that suggestion can be changed in the Option/Game mode.

The hint will be displayed in the analyze panel and also graphically on the board using Arrows (for a checker move hint) or Circle (for Double or Take action).

If you wish to play the hint, click the Hint icon again.

Note: requesting a hint cancels the move you made if you had played part of the roll.

### Invert the players

This option will swap the players but will prevent the game to count for the Elo.

## Show the pip count

If the pip count isn't displayed, you can use this option to verify the pip count. A little window will display on the center of the screen and stay there for 5 seconds.

## Change the players

You can, at any time, change the players. Though, doing so will prevent the game to count for the Elo.

You can also change the player type (i.e. pick a Human player to replace one previously played by the computer, or vice versa)

## Enter Illegal move

Allows you to enter an invalid move. You will need to type the move (for instance: 24/23 23/16\*), the checker move does not need to match the dice and you can move as many checkers as you want. You must, however, have the starting point be a checker of the player on roll. You cannot move the other players checker. If the arrival point is occupied by 1 or more of the opponents checkers, all checkers are moved to the bar.

## Play From Position.

When reviewing a game, you can use this option to replay the game from the position selected.

You will be prompted for options:

- **At cube Action:** Restart the game before the double or roll.
- **At Cube Action with Double/Take:** Restart the game after the double, forcing the opponent to take.
- **After cube action:** Restart the game after the double, with the same cube action.
- **With different dice:** Restart at the dice roll with new dice.
- **With the same Dice (this roll):** Restart at the dice roll but this roll will be the same. Subsequent rolls will be random.
- **With the same dice Sequence :** Restart at the dice roll with the same dice. All subsequent rolls will be the same as in the initial game (if you play more rolls in this replay than there were in the initial game, these rolls will be randomly picked).

## Swap the board.

When using this option, the board is swapped and the position remains the same. Using this option does not prevent the game to be rated.

## Finish the game Automatically.

This option is available when you are in a race. It will play all remaining moves for you .

Note that the computer will never double when finishing automatically. If you

see that the position is changing and that you might want to double, you should disabled the Auto finish by using the option again.

If the opponent doubles, it automatically stops the Auto Finish.

## Game Menu

The Game Menu allows you to Navigate in the game. Here is the complete description of the different entries.

<ul style="list-style-type: none"> <li>■ Start of Match</li> <li>■ Start of Game</li> <li>■ Previous</li> <li>■ Next</li> <li>■ End of Game</li> <li>■ End of Match</li> <li>■</li> <li>■ Previous Error</li> <li>■ Next Error</li> <li>■ Error Navigation Options</li> <li>■</li> <li>■ Flag Current Move</li> <li>■ Remove All Flagged Move</li> <li>■</li> <li>■ Add a comment</li> <li>■ Spell Check all Comments</li> <li>■</li> <li>■ Edit Game Info</li> <li>■ Stop Demo Mode</li> </ul> <p style="text-align: center;">Click on a menu entry for its description</p>	<p>Go to the beginning of the match or session (First move of first game).</p> <p>Go to the beginning of the current game.</p> <p>Move to the previous decision (For instance, if you are located on the move it will go to the previous double decision. If the player was not allowed to double, it will go to the previous move).</p> <p>Move to the next decision (For instance, if you are located on the move it will go to the next double decision. If the player was not allowed to double, it will go to the next move).</p> <p>Go to the end of the current game.</p> <p>Go to the end of the current match or session. If the game is not finished, eXtreme Gammon will go out of review mode and you can continue to play</p> <p><b>Go to the previous Error.</b></p> <p>Locate the previous error (or point of interest) from the current move displayed. If one player errors are not displayed (Using the popup menu on the move list) the player errors are skipped.</p> <p>Note: A consistent point of interest can be defined using the "Error Navigation Options" menu entry (see <a href="#">Error Navigation Options</a>)</p> <p>Locate the next error (or point of interest) from the current move displayed. If one player errors are not displayed (Using the popup menu on the move list) the player errors are skipped.</p> <p>Note: A consistent point of interest can be defined using the "Error Navigation Options" menu entry (see <a href="#">Error Navigation Options</a>)</p> <p><b>Error Navigation Options.</b></p> <p>Determines the event where Next Error will stop.</p> <p>See: <a href="#">Error Navigation</a> for more information</p> <p><b>Toggle Flag Current Move.</b></p> <p>Put a little flag next to the move. This is for you to mark a move for future review. Selecting this option again on a flagged move will remove the flag.</p> <p>Note that the action "Previous Error" and "Next Error" considers flags as a stop point.</p> <p><b>Remove all flagged moves</b></p> <p>This option removes all the flags on all the move of the match. To remove an individual flag, select the move and use the "flag Move" again.</p> <p><b>Edit Game information.</b></p> <p>This option displays the game information. You can modify some of the parameters.</p>
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See: [Game information](#) for more information

### **Stop Demo Mode.**

This option is enabled only when you set a game between 2 computers. It allows you to interrupt the game to regain control of program.

### **Spell check all comment.**

This Option will check in all comments:

- In the game itself
- The games header and footer
- The match header and footer

See: [Comments](#) for more information

### **Add a comment.**

To interrupt the game to regain control of program.

See: [Comments](#) for more information

## Batch Rollout Menu

The Batch Rollout Menu allows you to set up a list of rollouts to be perform later. For instance you can mark the moves in your imported games as you review them. When it's time to go to bed, start the batch rollout and the results will be ready in the morning.

<ul style="list-style-type: none"> <li>■ <a href="#">Mark for later analyze</a></li> <li>■ <a href="#">Auto Mark the session</a></li> <li>■ <a href="#">Auto Mark all existing Rollout</a></li> <li>■</li> <li>■ <a href="#">Clear Marks</a></li> <li>■ <a href="#">Clear Completed Marks</a></li> <li>■</li> <li>■ <a href="#">Select games to rolls</a></li> <li>■ <a href="#">Roll this Session</a></li> </ul> <p style="text-align: center;">Click on a menu entry for its description</p>	<p><b>Mark for later analyze.</b></p> <p>Mark the selected moves or cube action to be rolled later, a little gray clock icon will show on the moves selected.</p> <p><b>Auto Mark the session.</b></p> <p>This Option allows you to automatically mark all the decisions in a session based on different criteria.</p> <p><i>See: <a href="#">Auto Mark</a> for more information</i></p> <p><b>Auto Mark all existing Rollout.</b></p> <p>Mark all the existing rollouts to be batch rolled again, this is convenient to schedule a mass extend of rollouts.</p> <p><b>Clear Marks.</b></p> <p>Remove all the batch rollout marks in the session.</p> <p><b>Clear Completed Marks.</b></p> <p>Remove all the completed batch rollout in the session.</p> <p><b>Select games to rolls.</b></p> <p>This Option opens the Batch rollout dialog box, from there you can see all the scheduled rollouts and start the batch rollout process</p> <p><i>See: <a href="#">Batch Rollout</a> for more information</i></p> <p><b>Roll this Session.</b></p> <p>Start rolling out all the moves marked in the session currently opened.</p>
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# Analyze Menu

The Analyze Menu allows you to Analyze Games. Here is a complete description of the different entries.

- Double Action
- Position
- Game
- Match
- Set Analyze Level
- Clear Match Analyze
- Dice Distribution
- Race Formulae
- Match Equity Table
- Load Match Equity Table
- Cube information
- Create Bear off Database
- Batch Analyze

Click on a menu entry for its description

## Analyze Double Action.

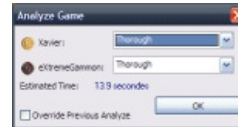
This option will analyze the Double decision on the move currently selected. The level used is the one currently set (See [Set Analyze Level](#) for more information)

## Analyze Position.

This option will analyze the Checker play on the move currently selected. The level used is the one currently set. (See [Set Analyze Level](#) for more information).

## Analyze Game.

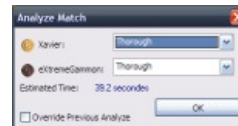
This option will analyze the game currently selected. You will be prompted for a level to use for both players. An estimation of the analyze time will be displayed.



## Analyze Match.

This option will analyze the entire match.

You will be prompted for which level to use for both players. An estimation of the analyze time will be displayed.



## Set Analyze Level.

This option will set the analyze level for both players.



By default the level is set according to the setting in [Options/Analyze](#).

You can override this setting by using this option. All subsequent analysis using [Double Action](#) or [Position](#) will use the new setting entered.

**Clear Match Analyze.**

This option cancels all the analysis made during the match.

**Dice Distribution.**

This option displays the Dice Distribution. When used from the menu, it will always consider the position before the dice are rolled. See: [Dice Distribution](#) for more information

**Create Bear off database.**

This option displays the Bear off database dialog. See: [Bear off database](#) for more information

**Race Formulas.**

Display the Race Information (pip count and Thorp Count).  
See: [Race Formulas](#) for more information

**Display the Match Equity Table.**

Display a window with the Current Match Equity Table used.  
See: [Match Equity Table](#) for more information

**Load a new Match Equity Table.**

This allows you to change the Match Equity Table (MET) used.  
Several MET are available in the eXtreme Gammon MET folder. Changing MET has little influence on the analysis, though some decisions are different from MET to MET.  
See: [Match Equity Table](#) for more information

**Display Cube information.**

Display a window with information related to the cube (gammon prices, double point, take point etc..).  
See: [Cube information](#) for more information

**Batch Analyze.**

A Batch analyze allows you to import and analyze a large group of games and allows you to store the results in the profiles.  
See: [Batch analyze](#) for more information



## Player Menu

The player menu allows to create, maintain player profiles. Here is the complete description of the different entries.

- [Add Analyze to Profile \(auto\)](#)
- [Add Analyze to Profile](#)
- [See Profile Results](#)
- [Create Profile](#)
- [Edit/Rename Profile](#)
- [Delete Profile](#)
- [Import Profile](#)
- [Export Profile](#)
- [Sort Profile](#)
- [Money History](#)
- [Nickname Mapping](#)

Click on a menu entry for its description

### Automatically Add the current game analysis to the player profile.

When using that option the result of the game will be automatically added to the profile of the player.

If neither player is associated with a profile (or in case of an imported game, if neither nickname is [mapped](#) to a profile) you will be prompted for the profile to use for each player.

If only one player is associated with a profile then the other player's result are not stored.

### Add the current game analyze to the player profile.

When using this option you will be prompted for which profile to use for each player.



You can use the entry <none> to discard the analysis of a player. The option create profiles allows you to create a new profile for the player (it will default to the player name and as a non playing profile).

### See profiles.

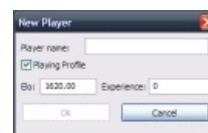
This option displays the profile dialog for you examine a profile. If a game is opened the profile displayed will be the one of the bottom player. If not game is open it displays the profile of the default human player

The profile dialogue allows you to later check any other profile stored.

See: [Profile](#) for more information

### Create a new profile.

This option allows you to create a new profile



The information you can enter:

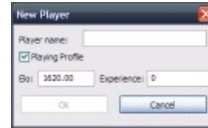
- The player name
- If the account is a playing profile or not. The only difference is that only profiles set as "playing" are displayed in the list of available names when you start a game.
- The ELO and experience: only for playing profile. You can start any account to any value you wish. Use your common sense and your knowledge and set these parameters to a reasonable value. If you don't

have a clue of your ELO, use the default values. If you are not too sure of your ELO, set the experience to 0 (it will allow your ELO to reach a more accurate value faster). If you are sure of your ELO range, set the experience to anything greater than 400.

See: [ELO](#) for more information

## Edit a profile.

After picking the profile to edit, the profile dialog is displayed:



The information you can enter:

- The player name
- If the account is a playing profile or not. The only difference is that only profiles set as "playing" are displayed in the list of available names when you start a game.
- The ELO and Experience: only for playing profile. You can start any account to any value you wish. Use your common sense and your knowledge of you level to set these parameters to a reasonable value. If you don't have a clue how much your ELO is use the default values. If you are not too sure of your ELO set the experience to 0 (it will allow your ELO to reach a more accurate value quicker). If you are sure of your ELO range, set the experience to anything greater than 400.

if you change a playing account to "non playing" the ELO information will be lost.

See: [ELO](#) for more information

## Delete a profile.

After picking the profile to remove you will be prompted in order to confirm the deletion of the profile

Profiles deleted are permanently lost. Though you can archive profiles by using the [Export Profile](#) option

## Import a profile.

Locate first a profile file to be imported (extension is ".pxg"). If the profile doesn't exist yet it will be created.

If the profile already exists you can Override or Merge the imported profile.

**IMPORTANT:** The profile will be restored with name of the file, for instance player1.pwg will be restored as Player1.

- **Override** will simply replace the profile with the new data.
- **Merge** will add the games, results, dice etc. of the current and imported profile. It recomputes ELO and experience.

Merging profiles is very interesting if you are using eXtreme Gammon at several location and want to see your overall results. Export the profile from one location and email yourself the file to the second location. Import/Merge this file

on the second computer. You can repeat the procedure the other way around if you wish to have your full results at both places.

### **Export a profile.**

First pick the profile to be exported, then pick a file name.

**IMPORTANT:** The profile will be restored with name of the file, for instance player1.pwg will be restored as Player1.

If you are using eXtreme Gammon at several location and want to see your overall results. Export the profile from one location and email yourself the file to the second location. Import/Merge this file on the second computer. You can repeat the procedure the other way around if you wish to have your full results at both places.

### **Sort a profile.**

First pick the profile to be exported, then pick a file name.

This will sort the profile game. it will affect the order of game displayed in the [Profile detail page](#) and the [Profile progression page](#)

### **Map Nicknames.**

This Option allows you to map the nickname of imported game to an eXtreme Gammon profile. This is very useful if you have several nicknames online and want their statistics to be kept together. You can also use this option to merge your statistics from online games with the one you get by playing eXtreme Gammon

See: [Nickname Mapping](#) for more information

### **Money History**

Displays the money history dialog.

See: [Money history](#) for more information



## Layout Menu

The Layout Menu allows to configure the different visual elements of eXtreme Gammon. Here is the complete description of the different entries.

- **Panel**
  - On the left
  - On the Right
  - Hidden
  - Small
  - Large
- **Evaluation Meter**
- **Tool bar**
- **Broadcast Banner**
- **Default Layout**
- **Board Only**
- **Mini**

Click on a menu entry for its description

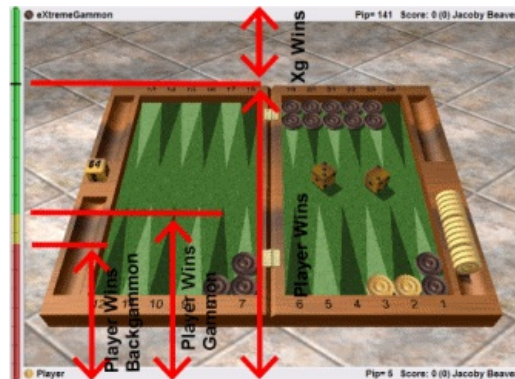
### Panel Display.

You can control how and where the panel containing the move list and the analyze tab is displayed. The different options are:

- **On The Left:** The panel is located to the left of the board
- **On the Right:** The panel is located to the right of the board
- **Hidden:** The Panel is not displayed
- **Small:** The panel display is small leaving more room for the board
- **Large:** The panel display is large improving the readability of the information.

### Evaluation Meter.

The Evaluation Meter is displayed left of the board. It shows the current winning changes of each player as well as Gammon and Backgammon Chances. The Black line show the current winning chances. Colors show single Game (green), Gammon (yellow) and Backgammon (red).



In this example the meter shows that the bottom player has a bit more than 70% chance to win the game, allows for a 25% chance of a gammon and slightly more than a 10% chance of a backgammon.

### Tool Bar.

The tool bar gives you quick access to the major features of eXtreme Gammon.

See: [Tool Bar](#) for more information

### Default

Change the layout to default one:

- Panel: On the left
- Evaluation Meter: Hidden
- Tool Bar: Displayed

### Board Only.

Change the layout to display only the board

- Panel: Hidden
- Evaluation Meter: Hidden
- Tool Bar: Hidden

### **Mini.**

Change the layout to display only the board and resize the window to the smallest size possible.

Resizing the window is not allowed in that mode. To cancel it use "default layout" or "board only". This will restore the previous size of the windows.

### **Broadcast Banner.**

When this option is set, the program will display a banner at the top and bottom of the board showing player name, dice and cube

This option was design to allow broadcasting live games that are transcribed on eXtreme Gammon using a service such as Ustream

# Options Menu

The Options Menu allows you to change the different settings for games, analyze etc. Here is the complete description of the different entries.

<ul style="list-style-type: none"> <li>■ Confirmation</li> <li>■ Auto Move</li> <li>■ Auto Roll</li> <li>■ See Move</li> <li>■</li> <li>■ Board Configuration</li> <li>■ Settings</li> <li>■ Game mode</li> <li>■ Board Orientation</li> <li>■ Use 4 decimals for Equity</li> <li>■</li> <li>■ Simple Mode</li> <li>■ Export Mode</li> <li>■</li> <li>■ Configuration Wizard</li> <li>■ Recalibrate</li> <li>■</li> <li>■ Set Language</li> </ul> <p style="text-align: center;">Click on a menu entry for its description</p>	<h2>Confirmation</h2> <ul style="list-style-type: none"> <li>■ On: You need to click on the dice once your move is finished in order to confirm it.</li> <li>■ Off: You have a small delay (delay can be change in Options/Game) during which you can cancel your move by clicking either mouse button. Once this delay has expired the move is confirmed and sent.</li> </ul> <h2>Auto Move</h2> <p>If active forced moves will be played automatically. Note that Auto Move will play the full move or nothing. For instance, if you are at the bar and roll 61 and cannot enter on the 6th point the move will not play automatically before you have the choice on how to move the 6 after entering. If you had 2 checkers on the bar the move would be played automatically.</p> <h2>Auto Roll</h2> <p>If Active the dice are automatically rolled when you cannot double. Otherwise you need to click on the board to roll the dice.</p> <h2>See Move</h2> <p>If active a little green dot or red dot cross will be displayed on the board when you hover above a checker. It shows the arrival point of this checker if played with the active dice (if you press the control key it will show the arrival point of this checker if you move it using both dice). If the move is legal the green dot is displayed, otherwise the red cross is shown. Note also that if your mouse is over a point that you can build a green dot shows. If you double click on the point eXtreme Gammon will move 2 checkers to it (for instance from the opening position you roll 42, if you move the mouse on the 4 point and double click it will move a checker from 8 and one from 6).</p> <h2>Board Setting</h2> <p>Use this option to control the way the board is displayed. You can use either 2D or 3D board, change the checkers, board etc.</p> <p>See: <a href="#">Board Settings</a> for more information</p> <h2>Game Settings</h2> <p>Use this option to define the game options, define analyze mode, create new rollouts settings, change the layout, change the sounds etc..</p> <p>See: <a href="#">Options</a> for more information</p> <h2>Game Mode</h2> <p>Change the current game mode</p> <p>See: <a href="#">Options/Game Mode</a> for more information</p>
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## Wizard

Restart the Configuration Wizard. The wizard allows you to set the main settings quickly.

## Calibration

Use this option to calibrate or recalibrate the analyze speed. It is not necessary to do so but running this calibration at least once will allow eXtreme Gammon to estimate the time an analyze will take so you can better decide which analyze level you want to use.

## Simple Mode

Switch eXtreme Gammon to simple mode.

See: [Simple/Expert Mode](#) for more information

## Export Mode

Switch eXtreme Gammon to expert mode.

See: [Simple/Expert Mode](#) for more information

## Board Orientation

Switch eXtreme Gammon to bear off checker left or right. Does the same as the shortcut key CTRL+Left and CTRL+Right.

## Use 4 decimals for Equity

Change the display of the equity between 3 and decimal.

Other data such as equity per decision, luck, winning chances are also affected by this setting.

## Set Language

Change the language used for the program.

## Windows Menu

The windows menu controls the display of extra windows. Here is a complete description for the different entries.

<ul style="list-style-type: none"><li>■ <a href="#">Show Analyze Queue</a></li><li>■ <a href="#">Game Summary</a></li><li>■ <a href="#">Match Summary</a></li><li>■ <a href="#">Elo Calculator</a></li></ul> <p>Click on a menu entry for its description</p>	<p><b>Show Analyze Queue.</b></p> <p>The analyze Queue windows show the moves yet to be analyzed.</p> <p>See: <a href="#">analyze Queue</a> for more information</p> <p><b>Game Summary.</b></p> <p>The Game summary show the analyze statistics about the game currently selected.</p> <p>See: <a href="#">Game/Match Summary</a> for more information</p> <p><b>Match Summary.</b></p> <p>The Match summary show the analyze statistics for the entire match.</p> <p>See: <a href="#">Game/Match Summary</a> for more information</p> <p><b>ELO Calculator.</b></p> <p>The ELO calculator shows how ELO changes depending on the outcome of the match.</p> <p>See: <a href="#">Elo Calculator</a> for more information</p>
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## Help Menu

The Help menu allows you to access the Help, GameSite 2000 websites, and register your version of eXtreme Gammon. Here is the complete description of the different entries.

<ul style="list-style-type: none"> <li>■ Content</li> <li>■ Index</li> <li>■ What's This?</li> <li>■</li> <li>■ Contact Technical Support</li> <li>■</li> <li>■ <a href="http://www.extremeGammon.com">www.extremeGammon.com</a></li> <li>■ <a href="http://www.GameSite2000.com">www.GameSite2000.com</a></li> <li>■ <a href="http://www.GammonSite.com">www.GammonSite.com</a></li> <li>■</li> <li>■ Check For Update</li> <li>■ What's new in this version</li> <li>■ Registration</li> <li>■ About</li> </ul> <p style="text-align: center;">Click on a menu entry for its description</p>	<p><b>Help Content.</b></p> <p>Open this help file on the Content Page</p> <p><b>Help index.</b></p> <p>Open this help file on the Index Page</p> <p><b>What's This?.</b></p> <p>The "What's this?" option allows you to get quick information about a button, area etc. Use this menu or click on the ? icon on the caption of any window. The cursor will change to a pointer with a question mark. Click on the element you are interested in. If available on this area a tool tip windows will display, describing the element.</p> <p><b>eXtreme Gammon Web.</b></p> <p>Open your browser and go to eXtreme Gammon Web site : <a href="http://www.eXtremeGammon.com">www.eXtremeGammon.com</a></p> <p><b>GameSite 2000 Ltd. Web.</b></p> <p>Open your browser and go to GameSite 2000 Web site : <a href="http://www.GameSite2000.com">www.GameSite2000.com</a> (corporate Web Site)</p> <p><b>GammonSite Web.</b></p> <p>Open your browser and go to GammonSite Web site : <a href="http://www.GammonSite.com">www.GammonSite.com</a></p> <p>GammonSite is a great place to play online against opponents from all around the world. Unlimited Free Access! (Membership allows to keep your ranking after your 1 month trial period is over)</p> <p><b>Update Tool.</b></p> <p>The update tool allows you to get the latest version of eXtreme Gammon, download new 3D objects, new layouts, 2D boards etc...</p> <p><i>See: <a href="#">Update Tool</a> for more information</i></p> <p><b>Registration.</b></p> <p>If you are already registered, this window will display your registration information.</p> <p>Otherwise, it displays the remaining number of executions you have left and allows you to register, either on the web or by snail mail.</p> <p><i>See: <a href="#">Registration</a> for more information</i></p> <p><b>Contact Technical Support.</b></p>
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Open an email with basic information about your version of eXtreme Gammon to contact technical support.

Note that support is only provided in French and English.

**What's new.**

Open the web page that shows the latest improvement and changes in eXtreme Gammon

**About.**

Show the about dialog

# Dialog boxes

- [3d Testing](#)
- [About eXtreme Gammon](#)
- [Add to Profile](#)
- [Auto Mark moves](#)
- [Analyze level](#)
- [Analyze Queue](#)
- [Batch Analyze](#)
- [Batch Rollout](#)
- [Bear off database](#)
- [Board Settings](#)
- [Calibrate](#)
- [Cube information](#)
- [Dice Distribution](#)
- [Elo Calculator](#)
- [End of Game or Match](#)
- [Export to HTML](#)
- [Error Navigation](#)
- [Game Information](#)
- [Game/Match Summary](#)
- [Match Equity Table](#)
- [Import Game](#)
- [Manual Dice](#)
- [New Game](#)
- [Nickname Mapping](#)
- [Options](#)
- [Play from position](#)
- [Pick Player](#)
- [Prompt for Rollout](#)
- [Quick Start](#)
- [Race formulae](#)
- [Registration](#)
- [See Profile](#)
- [Settlements](#)
- [Tutor Mode](#)
- [Update tool](#)



# 3D Testing

This dialog will display on first run of eXtreme Gammon. It will determine if you can use the 3D board and will configure the best settings for your system.



If you don't see the board at the beginning, you need to install DirectX. Go to [www.microsoft.com/directx](http://www.microsoft.com/directx)

If the board is displayed, the program will benchmark your video adapter's 3D capabilities. During a few seconds (up to 20 for slower systems) the board will spin. Close all other programs which may be running, as they could interfere with a proper benchmarking.

When the Benchmark is finished the popup will describe the quality of the 3D animations and advise you on the best settings.

Note: if you don't have 3D capability and go through this test, you will be using eXtreme Gammon in 2D mode. If later on you install DirectX, you can go to the Board Settings and press "3D board" and this test will be performed again.

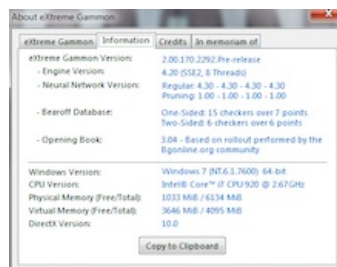
# About Dialog

Display information about eXtreme Gammon



The First Tab displays the eXtreme Gammon logo. The second tab contains some basic information about your system.

If you need help, please write to GameSite 2000 support, and include your system information. Press the "Copy to Clipboard" button and paste it into an email addressed to [contact@extremegammon.com](mailto:contact@extremegammon.com)



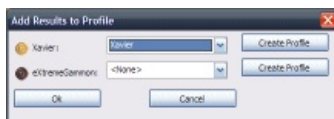
The third page shows the credits



The last page is in memory of my step-son Justin, [click here](#) for more information



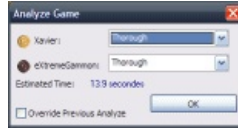
# Add To profile



This dialogue is displayed when you add a game to the player analysis using the menu Player>Add to analyze.

You can use the entry <none> to discard the analysis of a player. The option "Create Profile" allows you to create a new profile for the player (it will default to the player name and will be a non-playing profile).

# Analyze level



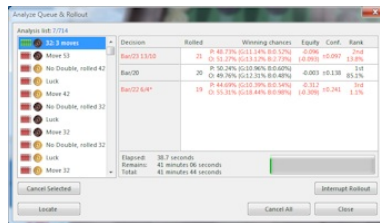
This dialogue opens if you ask for analyze (either Game or Match), or if you use the menu Analyze>Set Analyze Level.

You will be prompted for which level to use for both players. An estimation of the analyze time will be displayed.

For more about the different level, see [Analyze level](#)

# Analyze Queue

eXtreme Gammon will always analyze in the background in order to let you review the game or to play while it analyzes. You can check the state of the analyze queue at any time. This is the list of all evaluations.



- Analyze List: displays the number of moves already analyzed and the total moves that are in the queue.
- The list on the left shows all the evaluations with a quick description for each. Icons show the player and the [analyze level](#). The topmost entries are the next ones to be analyzed.
- Cancel All: Cancels all analysis.
- Cancel Current: Cancels the analysis currently selected in the list on the left.
- Locate: Go to the move currently selected.
- Close: Close this dialog (it does NOT cancel the analyze).
- Interrupt Rollout: Available only if the current analysis (top entry of the list) is a rollout. Using this option will interrupt the rollout and display the results.
- Current Rollout: Shows the progression of the current rollout with the number of games rolled and the maximum number of games set (see [rollout](#) for more information).
- Rollout information: This area updates when a rollout is in progress (or an XGRoller level evaluation). It displays the cubeless winning chances and the equities. It also includes the confidence interval at 95% for each move in the rollout.

The last column shows the rank of each move and the probability of each choice to be the top move.

# Auto Mark Moves



The auto mark dialogue allows you to automatically mark cube action or a move to be rolled later using the batch rollout feature (see Batch rollout for more information)

Here are the criteria you can set to pick which decision to mark:

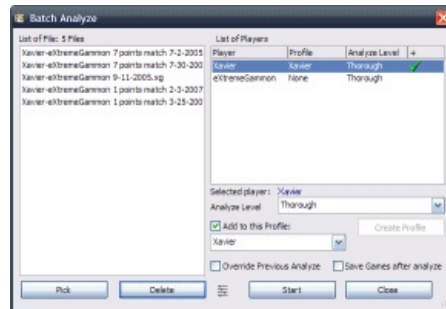
- Differences: Any play where the move played differs from the computer's pick
- Errors: Any play where the error in equity between the move played and the computer's pick is 0.020 or more
- Blunders: Any play where the error in equity between the move played and the computer's pick is 0.080 or more
- Outplays: Any play where you outplayed the computer.
- Close double actions within: Will mark any cube action where the difference between Doubling and not doubling (or dropping and taking) is less than the threshold entered.
- Close checker play within: Will mark any checker play where the difference between the top moves is less than the threshold entered. You can configure the maximum move to be marked. You can also exclude gin positions (positions where the final result will not change no matter what).

You can also decide if you want to mark the checker player and/or cube, and for one player or both.

You can skip the existing rollout or mark them again. In the later, you probably will want to extend them or override them, so make sure to pick the proper option in the batch rollout dialog.

# Batch Analyze

Batch analyze allows you to run an analysis on a large group of games. You can re-analyze games played in eXtreme Gammon or import games played on a backgammon server (in MAT format).



Use the pick button to select the game you want to analyze. You can use multi selection in the Open dialogue box. When you add a game, the 2 players will be added to the “list of players”  
The list displays the following information:

- Player name in the game
- Profile associated (see nickname mapping)
- The analyze level used to check this player move
- The check mark showing if the results will be saved in the player profile

You can change the level using the drop down box and you can save the game by checking the box in the lower right.

If a player has no profile associated with his name, use the “**Create Profile**” button if you wish to retain the players analysis.

There are 2 options that apply to all games to be analyzed:

- **Override analyze:** if checked, the analysis will be overridden with the new settings. Otherwise, eXtreme Gammon will only analyze moves if the previous analyze was in a lower level than the one currently being requested.
- **Save Game after analyze:** if checked, the game will be saved (in eXtreme Gammon format) at the end of the analysis (in the same folder as the initial game).

When you are ready, Press “**Start**”. The button will change to “**Show profile**”. Games will be removed from the list of games as they are analyzed.

Press “**Stop**” to cancel the analysis of all games entered. **Show profile** allows you to see the results as the process continues (profiles are updated only once a match analyze has finished)

The **options** button allows you to see the current move analyzed, display the summary for the match or game, etc...

Note: eXtreme Gammon uniquely identifies each game, so if you've already analyzed a game and stored the result in your profile, the new result will override the existing entry rather than adding the game twice in your profile.

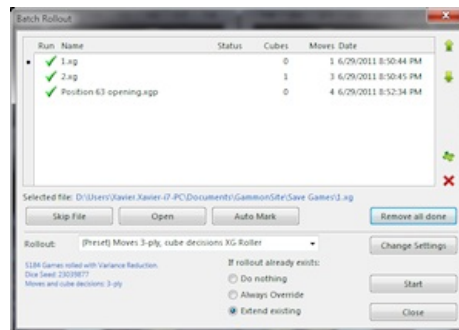
# Batch Rollout

Batch rollout allows you to schedule a move (or cube action to be rolled later). This is very useful if you want to analyze a few games after a night of online playing. You can analyze them using the level you want but there may be a few moves on each session that you might like to roll to either understand the position better or to verify if the computer got it right. However, if you do not have time to wait for each session to be rolled, then batch rollout is for you.

In that scenario here is what you would do:

- Open session 1
  - Navigate to any decisions that you want to roll and use the menu "Batch rollout>Mark for later analyze" (you can also use the little clock icon in analyze tab or use Shift+Ctrl+T)
  - Note that the move/cube schedule show a little clock icon next to them in the analyze tab and move list.
- Open session 2
  - Repeat what you have done for the previous session
- Repeat for all session
- When you are done
  - Open the batch rollout dialog (Menu "Batch rollout>Select game to roll")
  - Select the rollout setting you would like to use.
  - Press "Start"
  - Go to bed
  - Wake up and go to your computer
  - The rollout should be completed. The list will show your progress.
  - If you want to review, select a game and press "Open" the session
    - The schedule icons will now show green as the rollout has been completed.

Here are the detail of all the features on the batch rollout dialog.



The top area show the list of sessions that have any rollouts scheduled. You can change the order they will be processed using the up and down icon the right. you can manually add or remove a session using the "plus" and "X" icons on the right.

The second section from the top has the following buttons:

- **Skip file:** Mark the selected session to be skipped (the green check mark will disappear)
- **Open:** Open the session selected.
- **Auto Mark:** Open the file and use the default auto [mark setting](#) to mark which move to roll.
- **Remove all done:** Remove all the session from the list that have been completed.

The last section allows you to pick how the rollouts will be performed. You can pick one of the preset rollouts or one you have customized. Use the "change setting" to change the length, seed etc...

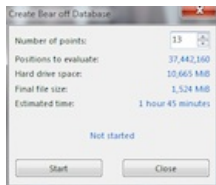
The set of radio button allows you configure what to do if your are batch rolling a decision already rolled.



- Do nothing: Will skip the rollout. It will, however, mark it as completed.
- Always override: The existing rollout will be discarded and a new one with the selected settings will start.
- Extend Existing: The rollout will be extended (the length is doubled)

Note that the Batch rollout dialogue is mode less, so you can access the main window and check the decision rolled so far (only for the game currently loaded). If you close the game or attempt to load another one, you will be prompted if you want to stop the batch rollout process.

# Bear off database



The bear off database tool allows you to create a larger database than the default one (up to the 6 points).

There are 2 reasons for using larger databases:

- The EPC can be calculated (see Race formulae for more information about EPC)
- The program is slightly more accurate in the race.

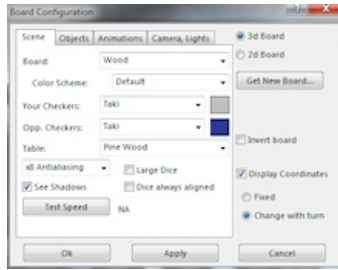
The downside of using very large databases is that they require a lot of memory.

For this reason you can only load in memory database up to the 11th point. You can however generate database up to the 13th point. For displaying EPC, eXtreme Gammon will always use the largest database on file, regardless of which is loaded in memory.

To create a database, pick the number of points the database will contain and press the "start" button. The program will check that you have enough free hard drive space. You need enough for the temporary files and the final file (the total amount is displayed under "Hard drive space"). Upon completion the temporary file will be deleted and the space used is the one display under "Final file size".

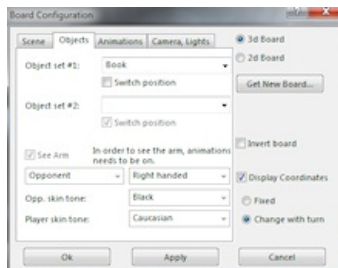
The process for large databases can take a few hours even on fast computers. If you interrupt the process, the data calculated so far will be lost.

## Board Settings



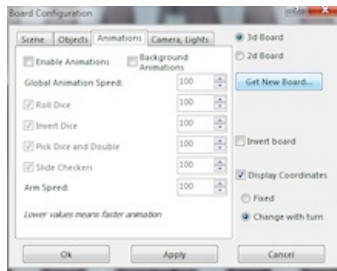
**Scene Tab Choices** allows you to configure the appearance of the board

- **Board** : The board itself (and the cube).
- **Your Checkers** : The checker you play, for some (Glass, Metal, Base) you can pick a color.
- **Opponent Checkers**: The checker your opponent plays, for some (Glass, Metal, Base) you can pick a color.
- **Table** : The surface on which the board lays.
- **Anti aliasing**: The options is available only on rather powerful video card, if turned on the display will be smoother, reducing the "stairway" effect. Be careful, speed performance drops a lot when this option is used.
- **See Shadow**: If turned on, checker and dice cast a shadow on the board (or several depending of the light scheme used). Turning the option off improves speed performance on slower video cards.
- **Dice always aligned**: If checked, the dice will always lay parallel to the board.
- **Large Dice**: Increase the size of the dice.



**Object Tab Choices** allows you to configure the objects around the board and the arm.

- **Object Set #1**: Pick any of the objects. It will be on the right of the board by default. Check the "switch position" to move it to the left. Pick the empty line if you don't want the object to be displayed. Note: some objects have a customizable color your can select (a little color picking square will be displayed on the right)
- **Object Set #2**: Same as Above
- **See arm**: If animations are enabled, an arm will move the checker and roll the dice. if you don't want to see the arm turn this option off.
- **Both player/Opponent**: If set for both players, the arm also moves your checkers. If you think it impairs the visibility of the checkers during your move, set the option to see only your opponents arm.
- **Right/Left handed**: Set left or right arm (note: the same arm is used for both players).
- **Opp. Skin tone**: Set the skin tone of the arm for the player on top
- **Player Skin tone**: Set the skin tone of the arm for the player at the bottom

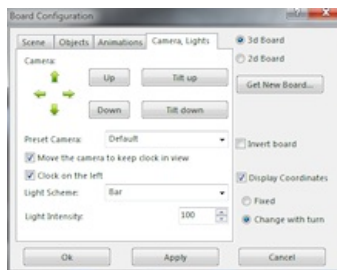


**Animations** allows you to configure the speed of the animations.

- **Enabled Animations:** turn on or off animations
- **Global animation speed:** Higher value means slower (and smoother) animations.

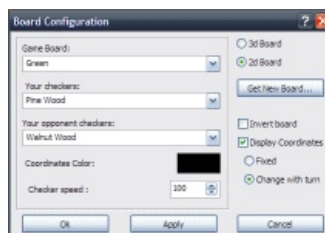
The next entry allows you to configure the speed of each animation, or to disable them. A speed of 100 is the default speed, a lower value means faster animations.

- **Roll Dice:** You see the dice rolling and bouncing.
- **Invert dice:** When you invert the active dice, the inversion is animated
- **Pick dice:** Upon completion of the move, the arm picks up and removes the dice from the board.
- **Slide checker:** You see the arm pick up and slide the checker on the board.
- **Arm speed:** Speed of the arm entering the playing area.



**Camera and lights Tab Choices** allows you to configure the view and the lighting of the scene

- **Camera:** Allows you to move the camera around. Left and Right, turn the camera around the center of the board. Up and down move the camera closer or farther from the board. Plus and minus buttons moves the camera up and down, still looking at the center of the board. Tilt up and down, tilt the camera.
- **Preset camera:** Choose between the different preset views from the drop down list.
- **Preset camera:** Choose between the different preset views from the drop down list.
- **Move the camera to keep the clock in view:** If checked, the camera will move slightly to the left or right so if you play with a clock you can see it. If the option is unchecked the clock values will be displayed also at the top and bottom of the screen
- **Clock on the left:** Choose which side of the board to place the clock.
- **Light Intensity:** 100 shows normal light, Higher values brighten the scene, lower values darken it.



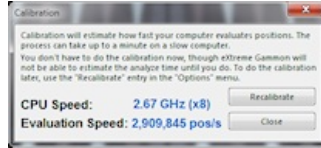
**2D options:** This configures the board if you are using 2D

- Game Board: The board used. If the word "coordinates" is displayed, the board has built in coordinates properly. If the coordinates are built in the board they will not display properly if you use the "invert board"
  - Your checkers: The checkers you play.
  - Opponent Checker: The checkers your opponent plays.
  - Coordinates color: Pick the color for the coordinates.
- 

### **Other options**

- Invert board: If selected, the checkers exit from your left, otherwise from your right.
- Display Coordinates: Show the board coordinates around the board.
- Fixed: The coordinates do not change with the turn.
- Change with turn: The coordinates change accordingly to who is on the roll.

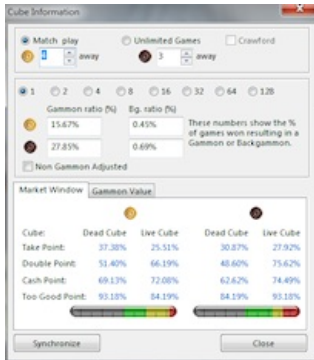
# Calibrate



This Dialog allows you to calibrate or recalibrate eXtreme Gammon. This gives you a good estimation of the analyze time.

Next to the CPU speed is the number of threads in the processor.

# Cube information



## Market Window

The market window shows what percentage of games one must win to Double, Take, Cash or be "too good." It assume a constant gammon and backgammon rate. These are entered above. In the example here it shows that for the bottom player (pine checker) 24.58% of his win will be gammons and 1.43% are backgammons (hence 73.99% will be single game).

The dead cube column shows the wins needed if the opponent cannot redouble. The live cube show the wins needed assuming perfect redouble efficiency for the opponent.



## Gammon/Backgammon Price

The relative value of winning a gammon compared with the value of winning a single game. Gammon price is computed as  $GP = (WG - W) / (W - L)$ , where  $WG$  = value of winning a gammon,  $W$  = value of winning a single game, and  $L$  = value of losing a single game. In unlimited games, the gammon price is 0.500. In match play, the gammon price depends on the score of the match and the level of the doubling cube).

For instance, in the example here (2-away/3-away) the gammon price for the leader is almost 1, so twice the unlimited games value.

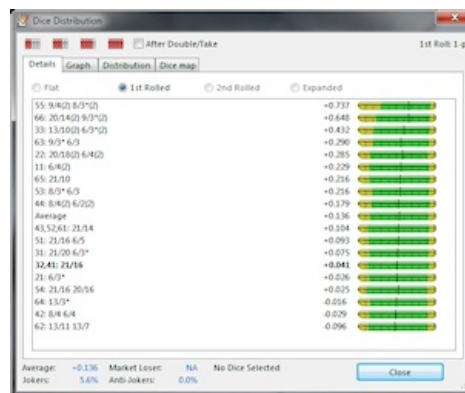
# Dice Distribution

The dice distribution dialogue allows you to see the detail of equity for dice rolls.

You can reach that dialogue in different ways:

**From the menu Analyze/Dice Distribution:** It displays the distribution of dice before the roll **From the pop up menu in the cube analyze tab:** It displays the distribution of dice before the roll **From the pop up menu in the Analyze move:** It will displays the dice distribution after this move is played

- Here is a description of the different Tabs:
  - Right are the analyze level , 2ply, 3ply, 4 ply, 5 ply. Click on any of the icons to re compute the distribution using this level
  - **Average:** Show the average equity
  - **Jokers:** Show the percentage of dice that will be jokers
  - **Anti-Jokers:** Show the percentage of dice that will be anti-jokers
  - **Market Loser:** Show the percentage of dice that are market loser (meaning that will lead to a position with a double/Drop)



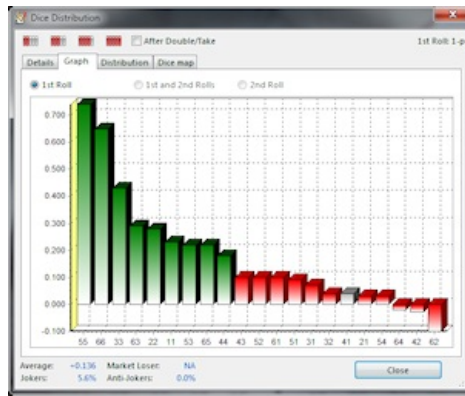
Display the equity of the dice. Order from best to worst.

- **Flat:** Display the 1296 possible combinations (available only if when a 3ply analyze or higher is made )
- **1st Rolled:** Display the 36 possible dice for the next player on roll, the move played, and its equity.
- **2nd Rolled:** Display the 36 possible dice for the 2nd player to roll. Moves are not available here, just the equity.
- **Expanded:** Display the 36 possible dice for the next player to roll and under each entry the 36 possible replies of the opponent

You can select several lines in the dialog, a label will display how many rolls are selected and the average equity of these selected dice.

The dice actually rolled (if available is displayed in bold)



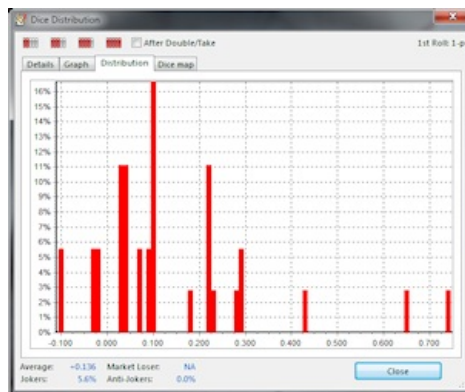


Display graphically the equities of each dice.

- **1st Rolled:** Display the 36 possible dice for the next player on roll
- **2nd Rolled:** Display the 36 possible dice for the second player to roll
- **1st and 2nd Rolls:** Display the 1296 possible combinations

The entries in red are the one lower than the average equity of the position, The ones in green are the one above the position equity.

The Dice actually rolled (if available) is displayed in white.



Display a graphical distribution of the equity



Display a graphical distribution of the equity for each of the 36 rolls. The Average column show the average for each individual die (over the 11 rolls containing that die)

# Elo Calculator

The Elo calculator allows you to see the influence of the game outcome on the player ELO.

Note that ELO formulas are slightly different for Nackgammon.

See the [ELO](#) page for more detail information.

## Simple

This page displays the current ELO of the player in the game being played or reviewed.

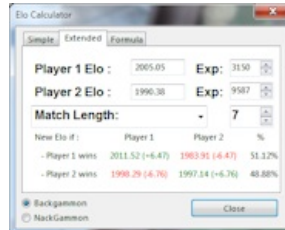
It shows the point of view of the bottom player only.



## Extended

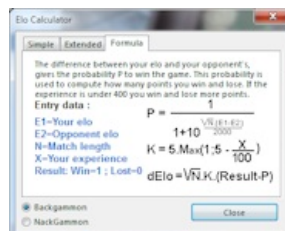
This page displays the current ELO of the players in the game played or reviewed.

You can modify ELO and experiences to see how it changes the results.



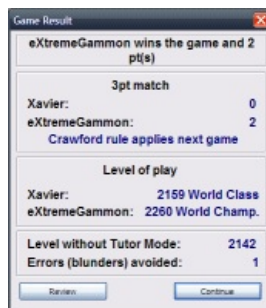
## Formula

This tab displays the Elo formula.



# End Game or Match

When a game or match finishes, a dialog opens to give you the status of the game:



End of game

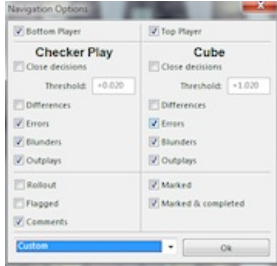


End of match

The sections displayed are from top to bottom:

- The status of the last game and the points won.
- Depending if it's the end of the game or of a match:
  - For games, the current score
  - For matches it show the score and the ELO gained or lost.
- Level of play: Displays the level of play for the game or the match (double click in the area to see the level for the match and the game respectively) The level displayed here is with the tutor help
- Only displayed if Tutor Mode is used: It shows the level of play without the tutor help and number of errors and blunders (in parenthesis) avoided by using the tutor.

# Error Navigation



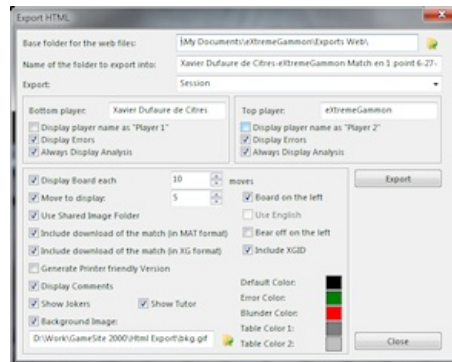
The Error navigation screen allows you to configure how the previous/next error button works. You can define what constitutes a point of interest and the program will stop on these:

- Bottom and top player: If unchecked any cube or move by the player will be skipped, regardless of the "checker player" or "cube" setting.
- Checker play: Defines the point of interest based on the error made. You can also stop on moves that were played correctly but where the decision between the top move was close. If you increase the threshold you will stop on more moves.
- Cube: Defines the point of interest based on the error made. You can also stop on cubes that were played correctly but where the decision between doubling or not was close. If you increase the threshold you will stop on more moves.
- Entry with special marking. For these entries the player setting is ignored.
  - Rollout: Any decision that has been rolled.
  - Flagged: Any decision that has been manually flagged
  - Comments: Any decision where the user entered a comment
  - Marked: Any decision marked for batch rollout
  - Marked and completed: Any decisions marked for batch rollout that have been rolled.

The drop down at the bottom of the dialog allows you to pick from a few predefined settings. The last entry of the list is custom. This will store your last custom settings.

# Export to HTML

This option allows you to create HTML files for moves and analysis. You can publish these files to your web site using a FTP program.



The options are:

- Location of the file generated: eXtreme Gammon will create sub folders in that location (one for the game and one for the images)
- Name of the folder to export into: Name of the folder where the game will be stored, It defaults to the current match filename.
- Export: Can be "Whole match Session" or "game". Note that for game it is saved by default. The export goes to a folder called "Games"

For each player you can set the following options

- Name displayed
- Anonymous: If checked, the player name will not be displayed in the generated HTML files
- Display Errors: If checked, the player error will be highlighted and the analysis of the error will be displayed.
- Always display analyze: If checked, the analysis is displayed for every move and all non trivial cube actions.

General options:

- Display board each: Setting that entry to 10 adds an image of the board every 10 moves. Boards are always display next to an error or analysis. If you wish to see the board after each move use 1 for that entry. The pages generated will be large.
- Move to display: Maximum number of moves to be displayed in the analysis (top N).
- Include download of the match (in MAT format): Add a link on the web pages to download the file in Jellyfish format (not analyze)
- Include download of the match (in XG format): Add a link on the web pages to download the file in XG format (With the analysis you have performed on the game)
- Uses share image folder: When checked, the web page will point to the "..\Image folder" That way if you export several game to the internet you can only upload the game itself without having the image. If unchecked, the image will be also copied to the game folder and you will need to export the HTML and images file.
- Generate printer friendly version: When checked, a linked is added to the top of each game page to a printer friendly version: Black and white moves and board, the file contains ALL the games in the match.
- Show Joker: Display the jokers in the move list
- Show Tutor: If the game was played using the tutor mode, checking this entry will display the move initially play by the player with a T
- Background image: Image used in the background of all page. If the check box is unchecked the entry "bkgrnd

Color” is display on the right to pick the background color

- **Board on the left:** If checked, the board will be displayed on the left side of the analysis. If unchecked the board is displayed above the analysis.
- **Use English:** (enabled only if the program is used in another language than English). When this option is checked the export will use the English language, otherwise the current language used for the program will be used. Note that this does not affect the comments.
- **Bear off on the left:** If checked the board will be displayed so that the bear-off is made on the left, otherwise it shows the board will the checkers bearing off on the right.
- **Include XGID:** If checked the XGID will be included under the board.

Color:

- Background Color: (only if the Background image is unchecked): Color of the background of all pages.
- Default Color: Color of the default text
- Error Color: Color to display errors
- Blunder Color: Color to display blunders
- Table Color 1: Color used in the header of table (game or match summary etc)
- Table Color 2: Color used in the content of table (game or match summary etc)

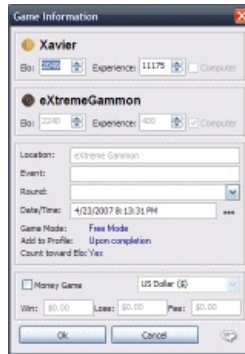
Press Export to generate the file (any existing export of the file will be overridden).

The files generated are:

- index.htm: The index file that creates the frame set for the games.
- game#.htm: One file for each game. It is displayed on the right frame.
- moveList#.htm: The list of moves for each game is displayed on the left frame
- gamelist.htm: Allow the selection of the game; this page is displayed in the top left frame.
- print.htm: If the “Generate printer friendly” version is checked, this is the file with the whole match in black and white.
- Image and Scripts are in the “images” folder, the whole content of this file needs to be updated to your web site (you need to do that only once)

# Game Information

This dialogue displays information related to the game. You can modify them as follows:



- Player ELO and Experience: Show the ELO and experience of the player at the beginning of the game. (can be edited only when importing a game)
- Computer: Checked if the opponent is a computer program. (can be edited only when importing a game)
- Location: Where the game was played.
- Event: If the game is part of a tournament, you can enter the event name here.
- Round: If the game is part of a tournament you can enter at what round the game was played.
- Date/Time: When the game was played. Click on the “...” button to display a calendar.
- Game Mode: In which mode the game was played. (only for game played in eXtreme Gammon)
- Add to profile: Can be “NO”, “Upon Completion” or “Already Entered”.
- Count toward ELO: Can be “No”, “Yes” or “Already counted”.
- **Time Settings:** Show the time settings used for that game.

## Money Game

If you check the box "Money Game" you can fill in the following information:

- For Match play
  - The amount won if you win the match
  - The amount lost if you lost the match
  - The fee paid
- For Unlimited games
  - The amount won or lost per point
  - The fee paid

See the real [money game section](#) for more information

## Comments

Click on the Comment icon to open the left section and enter comments for the match or for each game.

[See Comments](#) for more information

# Game/Match Summary

These dialogues show a summary for either the current game or the entire match.

## Common pages:

### Summary

Display the statistics from the analysis:

- Level of the play: Show the level category (see level) and average equity lost per decision (EPD)
- Display the Estimated ELO based on the EPD
- Checker play: Show the level of play for the checker move and its EPD
- Cube play: Show the level of play for cube decisions (double and take) and its EPD
- Luck: Show the average luck per roll and a description on how lucky each player was
  
- Total Error: Show the number of errors made and the number of blunders in parenthesis
- Equity (cost): Display the sum of all normalized equity lost and the cost in parenthesis (in % for game or point in unlimited games)
- Unforced move: Display the number of non obvious moves
  
- Double (blunder): Display the number of errors made on doubling with blunders in parenthesis
- Equity (cost): Display the sum of all normalized equity lost and the cost in parenthesis (in % for game or point in unlimited games)
- Wrong Double: Display the sum of all normalized equity lost by doubling incorrectly
- Missed Double: Display the sum of all normalized equity lost by forgetting to double
- Cube Decision: Number of non trivial cube decisions
  
- Take (blunder): Display the number of errors made on take with blunders in parenthesis
- Equity (cost): Display the sum of all normalized equity lost and the cost in parenthesis (in % for game or point in unlimited games)
- Wrong Take: Display the sum of all normalized equity lost by taking a double incorrectly
- Wrong Drop: Display the sum of all normalized equity lost by incorrectly dropping
- Take decision: Number of take decisions
  
- Resign (blunder): Display the number of errors made when resigning with blunders in parenthesis
- Equity (cost): Display the sum of all normalized equity lost and the cost in parenthesis (in % for game or point in unlimited games)
- Accept Resign (blunder): Display the number of errors made by accepting a resign with blunders in parenthesis
- Equity (cost): Display the sum of all normalized equity lost with the cost in parenthesis (in % for game or point in unlimited games)
  
- Joker: Display the number of jokers for the player
- Luck (Cost): Display the sum of all the luck of all moves with its cost in parenthesis (in % for game or point in unlimited games)

You can see the analysis with or without the tutor help. Note that if you display the results with tutor help and have followed the tutor recommendations, you will be rated almost 2240

### Error

Display the error for each player graphically. For match summary it displays the total errors for each game. You can choose to display either player or both by un-checking the checkbox with their name.



You can also elect to display only some error categories (move, double, take)

For match summary you can also display the error as equity per decision (EPD), total equity or cost (in % for game or point in unlimited games)

For game summary a running total of errors is also displayed (bottom player error – top player error). If this curve is under 0 the top player is outplaying the other.

## Luck

Display the luck per game (match summary) or roll (game summary), the color and sign of the luck shows who was lucky (green for positive if the bottom player is lucky, red for negative if the top player is lucky)

For match summary you can display the luck as luck per roll, total equity gain by luck, or cost (in % for game or point in unlimited games)

For game summary a running total of the errors is also displayed. If this curve is under 0 the top player is luckier than the other.

Luck Per roll	Name
Less than -0.040	Not your day
between -0.040 and -0.030	Very unlucky
between -0.030 and -0.020	Unlucky
between -0.020 and -0.010	Quite unlucky
between -0.010 and -0.002	Average
between -0.002 and +0.002	Insignificant
between +0.002 and +0.010	Average
between +0.010 and +0.020	Quite lucky
between +0.020 and +0.030	Lucky
between +0.030 and +0.040	Very Lucky
More than +0.040	It's in the wrist

## Dice

Display basic statistics for the dice rolled:

Note that 1st roll of each game is discarded.

- **Total Dice:** Number of dice rolled
- **Double:** Number of doubles rolled
- **Double Ratio:** Ratio of doubles (average value is 16.666%)
- **Longest double series:** Longest series of doubles rolled. For match summary this series can be spread across two games
- **Average Pip:** Average number of pips per roll (average value is 8.166)
  
- **Entering from the bar:** Percentage of entering at least one checker from the bar.
- **Excepted value:** Expected value of entering at least one checker from the bar.
  
- **Race dice:** Number of dice rolled during the race
- **Average Race Pip:** Average pip per roll during the race (average value is 8.166)
- **Race double:** Number of doubles rolled during the race
- **Race double ratio:** Ratio of doubles during the race (average value is 16.666%)

## Real Money

If you are playing for [real money](#), check the box "Show Money" to display the money amount rather than the cost. You can see that way how much your mistake cost you, how much the luck was in dollar etc..

## Specific page (Game)

### Wining chances

The winning chance graph shows the progress of the players chance to win the game.

- The Black line shows the chance to win. Higher values mean that the bottom player has a better chance to win.
- The Area in Red shows for each player the backgammon chances (bottom player backgammon chances are at the bottom of the graph, top player's backgammon chances are on the top)
- The Area in Yellow show for each player the gammon chances (bottom player gammon chances are at the bottom of the graph, top player's gammon chances are on the top)
- The remaining area is in green and the part under the black line shows the bottom player single game winning chances.

### Equity

The equity page shows the progress of the equity as the game progressed (normalize equity). +1 mean the bottom player is sure to win, -1 show the top player is sure to win. Higher or lower values reflect gammon or backgammon chances

## Specific page (Match)

### Game per Game

Display the overall level of play for each game of the match or session

### Match progression

In match: Display the match winning chances (MWC) of the bottom player as the match progress.

In unlimited games: Show the score as the game progress

# Match Equity Table

The match equity table dialogue displays the content of the currently selected MET.

The values displayed represent the change that the bottom player has to win the match at a particular score.

		Opponent is # point(s) away from winning									
		1PC	1C	2	3	4	5	6	7	8	
Player is # point(s) away from winning	1PC	50.00%									
	1C		50.00%	66.88%	75.05%	82.24%	84.62%	85.44%	91.00%	93.79%	94.70%
	2			48.62%	31.12%	50.00%	59.95%	67.54%	74.57%	80.94%	84.43%
	3				21.12%	24.95%	40.05%	50.00%	57.76%	65.26%	71.42%
	4					30.34%	17.76%	32.46%	42.24%	50.00%	57.73%
	5						18.06%	15.38%	25.40%	34.84%	42.27%
	6							17.70%	10.36%	19.66%	28.58%
	7								9.00%	15.57%	23.62%
	8									6.21%	12.38%
	9										3.32%
	10										

For instance, in the picture above, the bottom player is 3 away from winning and his opponent is 7 away (Say the score is 8-4 in a 11 points match or 4-0 in a 7 points match)

At the intersection of the row and column, the MET shows that the bottom player has a 76.38% chance to win the match.

When you display this dialogue with a match open it will color code some entries:

- Highlighted: The Current score
- Displayed in Green are the match winning chances of winning a single game with the current cube
- Displayed in Yellow are the match winning chances of winning a gammon with the current cube
- Displayed in Red are the match winning chances of winning a backgammon with the current cube
- Entries grayed are scores that cannot be reached in that game

Note about 1 away: There are 2 columns for 1 away depending if the Crawford rule is (or will be) in effect for this game.

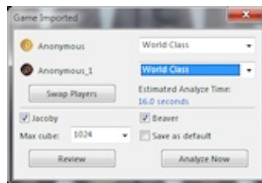
- 1 C. Shows the match winnings chances if the Crawford rule applies.
- 1 PC. Show the match winnings chances if the Crawford rule doesn't apply. (Post-Crawford)

In the example above, if the bottom player wins a gammon and 2 point he will be 1-away/7 away Crawford and his match winning chance is 91%. If he then loses the next game and 1 point, going 1-Away/6Away Post Crawford, his match winning chances would be 82.30%

You can load a different MET using the load button: see MET format in the technical section for more information if you want to enter your own MET.

# Import Game

This dialogue opens when you import a game. It allows you to invert the player and start the match analysis immediately.



- Swap players: Invert the position of the players.
- Review: Do not start the analysis and lets you review the game
- Analyse now: Start the analysis and lets you review the game
- Analyse level: Pick the level for each player. Default values are based on if the player is associated with a profile or not (see [options/Game](#) for setting these default levels)
- Estimated Time: Show the estimated time the analysis will take using the level set (see [Calibration](#))

The bottom section of the dialog allows you to set extra rules on the game in case the site you import from does not save this information. Rules that can be set includes:

- **Crawford**: For match only
- **Beaver and Jacoby**: For unlimited game only
- **Cube limit**

See the [Server](#) page for more information

## Pick Dice

This dialog displays when you use manual dice (see [option/main](#) on how to set manual dice) or when you [transcribe](#) a game



Use the key board key 1 to 6 to enter the dice. When it is the first roll the dice will show with different color. The first dice is for the bottom player and the second for the top player. The player with the higher dice will play first (you cannot enter a double)

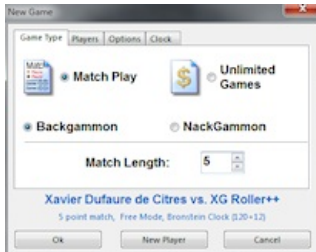
If you wish to revert to internal dice, click the button. If dice have been entered they will be used and only the next roll will be generated internally. If no dice are entered the internal dice take over immediately.

# Start a New Game

There are several steps you can go through to create a game. But most of the time you just need to go through the first one:

## Step 1

Set the Game Type:



- **Match Play:** You need to enter the match length
- **Unlimited games:** You can set the following options:
  - **Jacoby:** When in use the Jacoby rule specify that no gammon can be scored unless the cube has been used once
  - **Beaver:** A player has the ability to beaver an opponent's double if he estimates he is, in fact, a favorite.

Set the Variation:

- [Backgammon](#)
- [Nackgammon](#)

## Step 2



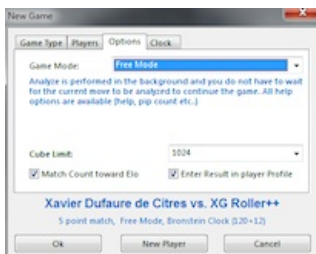
Set the players

For each player you can choose between **human** or **computer**.

When choosing a human you can pick from any existing playing profile. Press "new Player" to create a new account.

When choosing computer you can select the different levels. A short description of the opponent and its ELO are displayed.

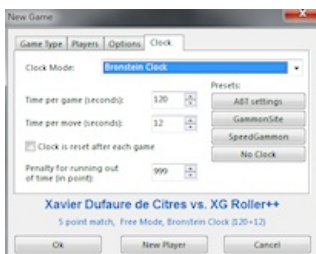
## Step 3



Options

- **Game Mode:** You can pick the game mode here. Note that you can change it during the game (see [game mode](#) for more information)
- **Enter Result in player profile:** If checked the result of the analysis is automatically entered in the [profile](#) upon completion of the analysis.
- **Match count toward ELO** If checked the result of the game will affect your ELO once the game is finished.
- **Cube limit:** Maximum value that the cube can reach.

## Step 4



Clock settings.

See [Time settings](#) for more information

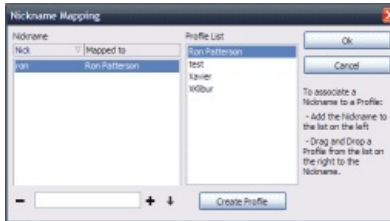
# Nickname Mapping

There are two versions of the nickname mapping window:

1. Main program
2. Per profile

## 1. Main Program

The nickname mapping window allows you to associate nicknames of player to profile.



This is useful in order to merge analysis results from different nicknames.

The list on the right is the list of profiles. Use this to create profiles or add a new one  
The list on the left is the list of association displayed as **“Nickname” -> “profile”**

To remove an association select it and press the – button

To add a nickname type it in the entry right under the association list. Press the + button to add it. It will create and entry **“Nickname -> None”**

To associate the nickname to a profile (or change an existing association) click and drag on the profile list and drop the profile on the nickname.

You can also associate 2 nicknames for reporting purposed in the profile. For instance, you play online against a player you know is using 2 different nicknames. If you wish to see your results aggregated against both nicknames in the profile, do the following:

- Type the second nickname and press the +
- Select the new entry in the list
- Type the first nickname and press the arrow button
- The entry in the list will show Nick2 -> Nick1

Press **Ok** to validate your change, or **Cancel** to discard any modification.

## 2. Profile

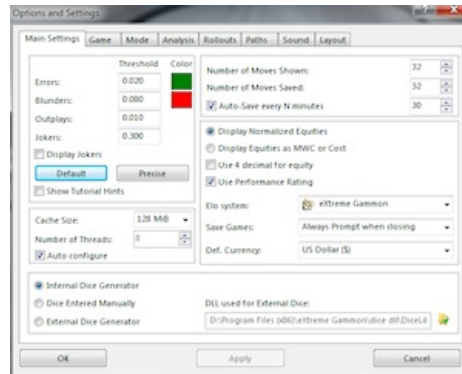
When using nickname mapping in a profile, you are mapping opponent names.

Let's say that you play a player whose name is WeirdNick1. You play another player called WeirdNick2. You realize you play the same person and want the statistic in the profile player page to aggregate the games played against both nicknames.

Use the nickname mapping window to associate WeirdNick1 to WeirdNick2 (or vice versa)

# Options

## Main Settings

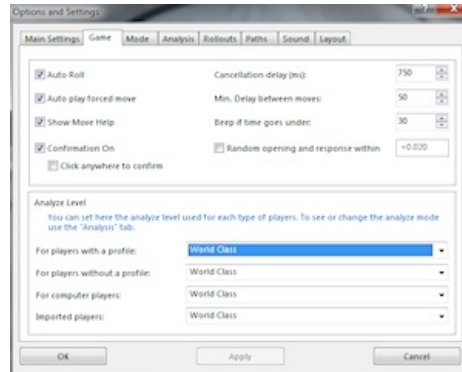


- Errors: Threshold used to determine if a decision is an error.
- Blunder: Threshold used to determine if a decision is a blunder.
- Outplay: Threshold used to determine if a decision is an outplay.
- Luck: Threshold used to determine if a decision is a joker.
- Color: Click to on the colored area to pick which color is used to display error and blunders
- Display Joker: If checked, the joker will be displayed in the move list.
- Default: Restore the threshold to the default value (error:0.020, blunder:0.080, outplay:0.010)
- Precise: Set the threshold to a precise value (error:0.001, blunder:0.020, outplay:0.001) This will show any difference of play with the computer as an error.
- Show tutorial hints: Show or hide the tutorial hint under the board
  
- **Cache Size:** Total size of the internal cache: a larger cache improves speed for rollouts.
- **Number of Thread:** Number of analyze threads used by the program, When set as auto, it will create a thread by core which is the optimal setting.
  
- Number of Move shown: Number of moves displayed in the analyze list when selecting a move. You can always show more by right clicking on the analyze list and use the menu "Show all moves". Note that even if the player's move is not in the top move it is always displayed.
- Number of move saved: Number of moves stored in a saved game. Lowering that value will reduce the size of the save game file. Again, the actual move play is always saved.
- Auto save every N Minutes: When this options is checked, eXtreme Gammon will save the current session opened on regular basis. Any rollout in progress will be also saved up to that point.
  
- Display Normalize Equity: Display analyze results as normalize equity (default)
- Display Equities as MWC or cost: Display analyze results as match winning chances (in match) or points (in unlimited games)
- **Use Performance Rating:** Display the performance rating rather than ELO. Check [here](#) for more.
- ELO: Display which ELO formula is used to display all ELO's. Note that eXtreme Gammon stores only the equity per decision so changing that setting will also show the new ELO on old games you have in your statistics. In other words, you can play with that setting without having to worry if it will mess up your statistics. See the [Server](#) section for more information on the differences between ELO systems.
- Save Game: Pick an option to determine how you are prompted for saving the game when closing:
  - Automatically for all: Always save without prompting any game opened
  - Automatically for completed game: Save without prompting matches that are completed, otherwise prompt for save.
  - Always prompt: Always prompt you.
  - Prompt for unfinished game: Prompt for saving if the game is unfinished, otherwise do not save.
  - Never: Never prompt and never save a game.



- Internal Dice Generator: Use the built in random dice
- Dice entered manually: You manually enter each dice
- External dice Generator: Use an external dice DLL
- DLL used for external dice: Click on the “...” button to pick a dice DLL. If the DICE external function cannot be located in the DLL you will be prompted when applying the change and it will revert to internal dice.

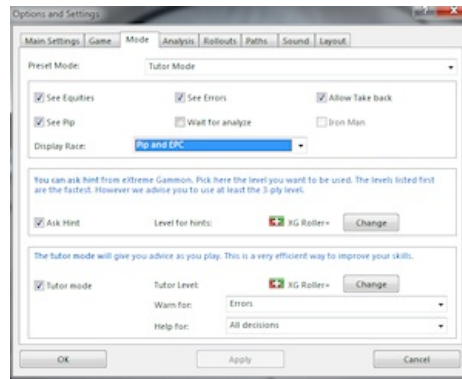
## Game



- Auto Roll: If checked the dice are rolled automatically when you cannot double, otherwise you need to click anywhere on the board to roll the dice.
- Auto Play forces move: If checked and a move is forced it will be played automatically.
- Show move help: If active a little green dot or red cross will displayed on the board when you hover above a checker. It shows the arrival point of this checker if played with the active dice (if you press the control key it will show the arrival point of this checker if you move it using both dice). If the move is legal, the green dot is displayed, otherwise the red cross is shown. Note also that if your mouse is over a point that you can build on, a green dot shows. If you double click on the point eXtreme Gammon will move 2 checkers to it (for instance from the opening position you roll 42, if you move the mouse on the 4 point and double click it will move a checker form 8 and one from 6).
- Confirmation On: If ON: you need to click on the dice once your move is finished in order to confirm it. If OFF: you have a small delay (delay can be changed in Options/Game) during which you can cancel your move by clicking either mouse button. Once this delay has expired the move is confirmed and sent.
- Click anywhere to confirm: If the option is on you can confirm your move by left clicking anywhere. Right click still cancel the move.
- Cancellation delay (ms): When confirmation is OFF this is the delay you have until the move is send. Click anywhere on the board to cancel your move. The delay is expressed in milliseconds (so 1000 mean 1 second)
- Min delay between moves: Minimum time between 2 moves in milliseconds. When you are dancing it gives you time to see the computer rolls and moves.
- Beep if time goes under: When using the clock, if your time reaches that threshold (in seconds) the display will turn red and a sound effect will be played every second
- Analyze level
  - For players with a profile: Level of analysis used for players who have a profile
  - For player without a profile: Level of analysis used for players who don't have a profile (mainly when you import a game)
  - For computer players: Level used to analyze the computer moves, If the computer level is higher than this value, the computer level is used.

## Game Mode

You can create a custom mode by changing these options



- See Equities: If unchecked moves are displayed without equities. The difference between the best moves is still displayed.
- See Errors: If unchecked the errors are not shown until the game is finished.
- Allow Take back: If checked you can take back a move or more generally start at any point of the save game using the “play from position” from the action menu.
- See Pip; If checked the pip count is display above and under the board.  
You have the following choice on how to display a race:
  - Pip only: will just show the pip count
  - Pip or EPC: If the position is in the bearoff database it will display the EPC, otherwise the pip count will be displayed
  - Pip and EPC: Display both pip and EPC. for the later it is displayed only if the position is in the bearoff database.
- See [bear off database](#) for more information on EPC
- Wait for analyze: When checked the game will not progress until the move is analyzed and the result displayed. You need to click anywhere on the board to continue.
- Ask Hint: If checked you can ask a hint from the computer using the hint entry from the action menu or the light bulb icon in the taskbar.
- Level for hint: Level used to generate the hints
- Tutor Mode: If check the game is played in tutor mode. In tutor mode the computer will analyze each move as you play and warn you of any errors allowing you to either reconsider your move, ask for a hint, or proceed with your choice.
- Tutor Level: Level used to analyze your move in tutor mode
- Warn for: Level of error at which the tutor will warn you of a mistake (blunder, error, or any difference)
- Help for: You can use the tutor for all decisions or only checker play, cube, double, or take decision.
- Iron Man: Activate Iron Man Mode

The defaults modes are

- Free: Analyze is performed in the background, and you do not have to wait for the current move to be analyzed to continue the game. All help options are available (help, pip count etc..)
- Tutor: In tutor mode the computer will analyze your move and warn you of any error, giving you a chance to reconsider your choice.
- Teaching: In teaching mode the computer will analyze your move and display the analysis before you can continue the game. You cannot reconsider your move in this mode.
- Coaching: In coaching mode the computer will analyze your move and display the analysis before you can continue the game. It does not display the absolute equity of each choice, only the difference from the best choice. You cannot reconsider your move in this mode.
- Competition: Analyze is performed in the background, and you do not have to wait for the current move to be analyzed to continue the game. No help options are available (help, pip count etc..) and errors are not displayed until the end of each game.
- Iron Man Mode: In Iron Man mode, the analysis is automatically added to your profile and cannot be removed. While playing no help or status are available. You can enter or exit Iron Man mode only during your 1st move of the match

## Analysis

Allows you to custom create an analyze mode. Pick one of the last 4 entries to create a new one or edit an existing mode.



- Analyze Mode: enter the mode name
- 1st pass: Moves are always analyzed at this level
- 2nd pass: if the computer choice in the 1st pass is different than the move actually play both the computer choice and the player choice are analyze at a higher level:
  - If different: Level used if the players move was not an error but just different from the computer's.
  - If error: Level used if the player move was an error
  - If blunder: Level used if the player's move was a blunder
  - If outplay: Level used if the player's move was an outplay
- Luck: Level used to calculate luck
- Use Different settings for cube: If checked, you can define different parameters for cube analysis for both the first and second pass

Other Options (do not depend of the analyze level)

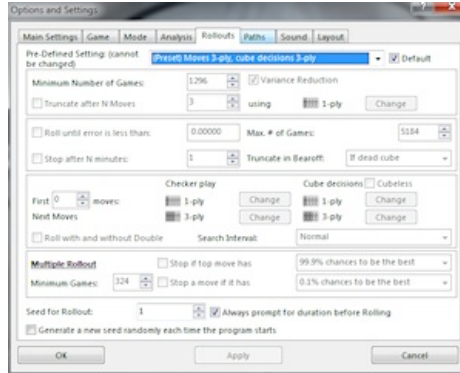
- **Do not Calculate resign error:** If checked the computer will not mark any resign error. This is useful for some online sites which don't save the last roll when someone resigns.
- **Use opening book:** if checked the computer use the opening book that contains hundreds of pre-rolled analysis.
- **Do not roll opening book moves:** If checked the computer will never roll a mistake made if the move is in the opening book
- **Error Compared to XG:** If check the analysis result will be calculated compare to eXtreme Gammon (3ply). If it turns out you did better than that player you will get an outplay. When the option is unchecked the level is compared to the best known move and you can never have an outplay.
- **Wrong Double/ Wrong Take is not an error:** When this options is turned on if a player makes an improper double and the opponent takes or drops improperly, only the player taking is charged with an error. For example, the equities are respectively, 0.850 0.800 and 0.700 for no double, double/take, double/drop. The player doubles (incorrectly as he lost 0.050 equity would the opponent take the proper decision) but the opponent drops. If this option is on then the player is not charged with a mistake having "psyched" his opponent. The player dropping is charged with a 0.300 error.

Notes: You can not pick 6-ply or 7-ply because they are too long (you can still use then but manually)  
If you pick rollout as a level, it uses the default rollout setting you have selected. (see rollout page)

- **Search interval:** The search interval affects how many moves are analyzed at a deeper level. For instance in 3-ply, the normal search interval will analyze up to 4 moves in the top level. If you change the search interval to huge, it will check up to 8 moves. If you pick gigantic, then 16 moves can be analyzed. This will slows down the program both for analyzing and playing while the gain in accuracy is rather small.
- **Bear off Database:** If you have generated bearoff databases you can use them for analyzing. The gain is very small however. You can load in memory only databases up to 11 points. If you have larger databases they are will be used for

- EPC display purposes.
- Match Equity Table: Pick here the Match Equity table used for all modes.

## Rollouts



You can define the setting for rollouts. There are 7 preset mode and 3 that you can edit. To set the default rollout used select it from the drop down list and check the box "Default". Other global settings for rollouts are:

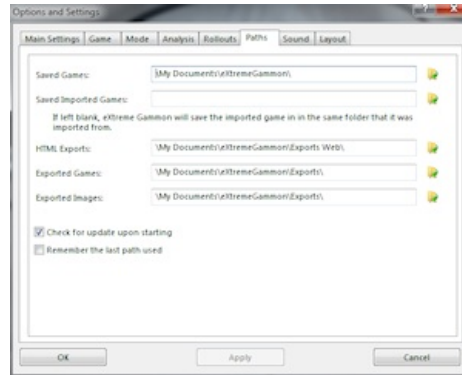
- Seed for rollout: Seed used for generating the dice. Default value is 1. If different the seed will be display in the roll tip when you hover over an analyze.
- Prompt for Rollout: If the option is unchecked and you ask for a rollout it will use all default values. If checked you will be prompted for the minimum number of games, the maximum number of games (if it applies), the maximum time (if it applies), and the confidence to reach (if it applies).
- Generate a new seed each time the program start: If checked, each time you start eXtreme Gammon, a new seed will be used.

Here is a description of all the rollout settings:

- Minimum number of games: Minimum number of games to be rolled. If options like "Roll until error is less than" are used and the criteria to stop is reached, the rollout will not terminate until the minimum number of game has been reached.
- Truncate after N moves: If used the rollout will stop after N moves. The position will be analyzed and used for the game result. This speeds things up considerably during the rollout but results still depend closely on the neural network output.
- Truncation Level:** Level used to analyze the position when the truncation point is reached. If the setting for the last move played is better than the level, then the better level is used (for instance if the rollout used 3-ply, then setting the truncation point to 1-ply or 2-ply has no effect: a 3-ply will be used)
- Variance reduction: When variance reduction is used the luck of each roll is added to the actual result. That allows the final result to have a small confidence quicker. Note that when using variance reduction you should lower the minimum number of games (roughly 180 games when variance reduction is equivalent to 3600 without it).
- Cubeless rollout: When used the games are rolled without any player doubling (note that moves are still made with the score in mind). When the rollout is completed the cubeless evaluation is transformed into cubefull.
- Roll until error is less than: When checked the rollout will continue beyond the minimum number of games until the confidence goes under the value specified.
- Max number of games: Show the maximum number of games for the rollout, even if the options like "Roll until error is less than" or "stop after N minutes" are used and their criteria has not been satisfied.
- Stop after N minutes: The rollout will interrupt after N minutes (unless the minimum number of games is not reached)
- Truncate in Bear off: Tell eXtreme Gammon how to handle the game rolled when reaching a bear off position.
  - If Dead cube: Truncate the rollout only if the cube cannot be used.
  - Always: Always truncate the rollout when reaching a bearoff position.
  - Never: Never truncate.

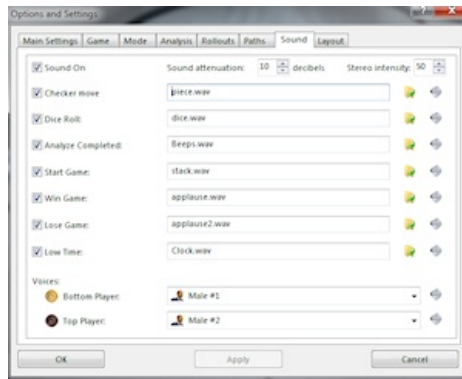
- **Roll for both Double and NoDouble:** If checked, a rollout of a move will roll both the line with the opponent doubling and not doubling.
- **First N Moves:** If the values is not 0 you can pick which level is used for cube and checker decisions during the first move of the analysis.
- **Next moves:** If the first move is set to 0, the levels set are used for cube and checker decisions for the entire rollout. If the first move is set to a value different than 0 the next move level will be used after the first moves are played.
- **Multiple Rollout:** When running several moves at the same time you can interrupt the rollout when the best move reaches a high confidence to be the best move.
  - **Min Game:** Minimum number of games to be rolled before the rollout can be interrupted.
  - **Stop if top move has 99% chance to be the best:** When a move reaches the desired confidence the rollout will stop
  - **Stop a move if it has 1% chance to be the best:** When a move falls under the limit, the rollout of this move will stop. Other moves will continue. Note that this setting will apply only if there are 3 moves or more to roll.

## Path



- **Save Game:** Location of the game saved
- **Save imported Games:** Where the imported games are located. If you leave it blank the games will be saved in the imported games folder.
- **HTML export:** Location of the folder where the export in HTML are stored. (Note that if you change that default, you will not have the option to remove the file created in that location during the uninstall process).
- **Exported games:** Location of the folder where exported games are created. (Note that if you change that default, you will not have the option to remove the file created in that location during the uninstall process).
- **Exported images:** Location of the folder where exported images are stored. (Note that if you change that default, you will not have the option to remove the file created in that location during the uninstall process).
- **Check for update upon starting:** If checked, eXtreme Gammon will check if a newer version is available and if so, will notify you.
- **Remember the last path used:** If checked, the above folder will be changed each time you pick a different one. For instance if your default folder is "`\\My Documents\\XtremeGammon\\`" but you save the current game in "`\\My Documents\\XtremeGammon\\test\\`", if this option is checked, next time you try to save a session it will go in the "`\\My Documents\\XtremeGammon\\test\\`" folder.

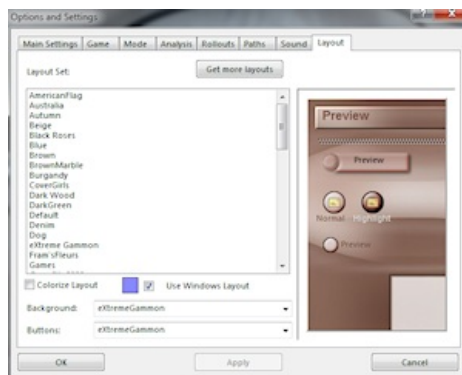
## Sound



You can pick different sound files for each item (any wav will work), click on the "..." to pick another file, press the play icon to listen to the currently selected sound file. You can disabled each sound effect individually by unchecking the box next to it.

- Sound On: If unchecked the sound is off, otherwise the sound effects selected below are enabled.
- Sound Attenuation: Allows you to lower the sound effects volume. This option may not be enabled if your sound card does not support this feature.
- Stereo intensity: When checked, the sound will will come from the left or the right. Increasing this value will make the stereo effect more pronounced. This option may not be enabled if your sound card does not support this feature.
- Checker move: Sound made by the checker moving.
- Dice: Dice roll sound.
- Analyze Completed: Sound made once a analysis is completed.
- Start Game: Sound used when a new game starts.
- Win Game: Used when a human player win a game.
- Lose Game: Used when the computer beat a human player.
- Low time: If you play with the clock, this sound will be played each second when your time goes under 10 seconds (you can configure the 10 seconds threshold in the game tab).
- Voice Bottom Player: Voice used for the bottom player (doubling, resigning etc, will trigger the voice)
- Voice Top Player: Voice used for the top player (doubling, resigning etc, will trigger the voice)

## Layout



- Layout set: Using a setting will both set the background layout and the buttons.
- Get more layout: Open the [update tool](#) to retrieve more layouts.
- Colorize layout: When checked the layout will be colorized using the selected color.
- Colorize color: Color used for colorizing the layout
- Use window layout: When used extreme Gammon uses standard windows controls.
- Backgd: Layout used for the background.
- Button: Button layout.

# Play from Position

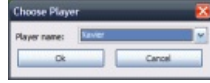
Allows you to resume the game from the current position.



The options are:

- At cube action: Restart the game before the double or roll.
  - At Cube Action with Double/Take: Restart the game after the double, forcing the opponent to take
  - After cube action: Restart the game after the double, with the same cube action.
- 
- With different dice: Restart the dice roll with new dice.
  - With the same Dice (this roll): Restart the dice roll but this roll will be same, Subsequent rolls will be random.
  - With the same dice Sequence: Restart the dice roll with the same dice. All subsequent rolls will be the same as in the initial game (if you play more rolls in this replay than there were in the initial game, these rolls will be randomly picked).

# Pick Player



This dialog is displayed when you need to select a player. It displays a list of all profiles.



# Profile

## Summary

	Overall	Perf.	Checker play	Cube play
Last 5	Expert (-0.0104)	5.18	Expert (-0.0137)	World (-0.0020)
Last 10	Expert (-0.0117)	5.82	Expert (-0.0117)	Expert (-0.0113)
Last 50	Expert (-0.0120)	6.01	Expert (-0.0106)	Advanced (-0.0237)
Last 100	Expert (-0.0123)	6.15	Expert (-0.0111)	Advanced (-0.0217)
Last 250	Expert (-0.0123)	6.18	Expert (-0.0114)	Advanced (-0.0196)
Last 500	Expert (-0.0111)	5.54	Expert (-0.0106)	Expert (-0.0114)
Last 1000	Expert (-0.0104)	5.20	Expert (-0.0102)	Expert (-0.0114)
Last 1500	Expert (-0.0104)	5.20	Expert (-0.0104)	Expert (-0.0104)
Last 2000	Expert (-0.0106)	5.29	Expert (-0.0106)	Expert (-0.0105)
Last 2500	Expert (-0.0109)	5.43	Expert (-0.0109)	Expert (-0.0107)
Last 3000	Expert (-0.0114)	5.68	Expert (-0.0114)	Expert (-0.0114)

### Overall Level

Show your level of play (Checker and cube Combined) based on all the games analyzed. The entry shows:

- The ELO level
- A description of the level (World Champ, World Class, Expert etc.)
- The average equity lost per decision.

### Checker Play

Show your level of play for the checker play based on all the games analyzed. The entries displayed are the same as for the overall level.

### Cube Action

Show your level of play for cube play based on all the games analyzed. The entries displayed are the same as for the overall level.

### Average Luck

Displays the average amount of equity per roll (counting the rolls of both player) that you have gained or lost.

### Unlimited games Performance

Performance based on the results of the unlimited games played.

### Current Score

Score and number of unlimited games.

### Match Play Performance

Performance based on the results of the match played.

### Current ELO/Exp

The current ELO you have in the match.

### Last N games

Show the overall, ELO, checker player, and cube play performance on the last 5, 10, 50, etc. games. This allow you to quickly see how your performance improves over time.

Level of play is computed using all the games entered in the statistics. Though older games have less importance in the calculation than the newest ones. The calculation is based on a decision half life of 10000. This means that a game played 10000 decisions ago is twice less important than the last game played. A game played 30000 decisions ago is 8 time less important than the latest game.

Even though, overall level, unlimited games performance, match play performance, and current ELO measure the very same thing, they can be rather different. Overall level is the most accurate, then comes match play performance, unlimited games performance and current ELO are the less accurate.

If you play using the tutor mode the current ELO and match play performance do not represent your true level but the one of the computer. The overall level accurately represents your level of play.

## Results

	Overall	Perf.	Checker play	Cube play	Info
Total	Expert (-0.0114)	5.71	Expert (-0.0114)	Expert (-0.0114)	
1	Expert (-0.0109)	5.46	Advanced (-0.0166)	Wow! (-0.0071)	🟢🟢🟢
2	World Champs. (-0.0050)	2.50	World Class (-0.0062)	World Champs. (-0.0000)	🟢🟢🟢
3	Expert (-0.0100)	5.43	Expert (-0.0140)	World Champs. (-0.0000)	🟢🟢🟢
4	World Champs. (-0.0040)	2.41	World Champs. (-0.0040)	NA	🟢🟢🟢
5	Expert (-0.0134)	6.70	Advanced (-0.0040)	World Champs. (-0.0000)	🟢🟢🟢
6	World Class (-0.0077)	3.56	World Class (-0.0084)	World Champs. (-0.0000)	🟢🟢🟢
7	Expert (-0.0121)	6.07	Expert (-0.0134)	World Champs. (-0.0000)	🟢🟢🟢
8	Expert (-0.0134)	6.73	Expert (-0.0117)	Advanced (-0.0121)	🟢🟢🟢
9	Advanced (-0.0161)	8.07	Expert (-0.0121)	Beginner (-0.0136)	🟢🟢🟢
10	World Class (-0.0090)	4.49	World Class (-0.0090)	NA	🟢🟢🟢
11	World Class (-0.0077)	3.85	World Class (-0.0074)	World Class (-0.0093)	🟢🟢🟢
12	Expert (-0.0111)	5.54	World Class (-0.0061)	Beginner (-0.0473)	🟢🟢🟢
13	Expert (-0.0130)	6.92	World Class (-0.0075)	Distracted (-0.0793)	🟢🟢🟢
14	Expert (-0.0105)	5.23	World Class (-0.0091)	Advanced (-0.0212)	🟢🟢🟢
15	World Champs. (-0.0040)	2.88	World Class (-0.0061)	World Champs. (-0.0000)	🟢🟢🟢
16	Expert (-0.0122)	6.10	Expert (-0.0124)	World Champs. (-0.0000)	🟢🟢🟢

This page shows all the results in your profile.

The top row contains the average value for all the games displayed. Each entry shows:

- The game index number (1 being the latest game entered).
- The overall level and ELO.
- The checker play performance.
- The cube play performance.
- Info: a red mark show a loss, green for a win. A red face shows a game where you were unlucky, and yellow if you were lucky. Also a red T will be displayed if the game was played in tutor mode and an iron man statue is display for game played in [Iron Man Mode](#).

You can filter the games displayed by time, match length, matches won, matches lost, last n games etc..

## Detail

	Decisions	Eq. lost	Errors	Blunders	Moves/Err.	Moves/Bl.
Total	179951	-0.0114	23941	7854	7.52	22.91
• Moves	154050	-0.0114	21106	6446	7.30	23.90
• Doubles	2154	-0.0096	2188	964	9.67	21.50
• Takes	4739	-0.0190	642	423	7.38	11.20
• Resigns	9361	-0.5256	5	1		

Luck detail	
Rolls	392964
Jokers	20271
Anti-jokers	20079
Roll/taker	19.39
Roll/anti-joker	19.57
Luck per roll	0.0000
Total equity	-12.60
Outplay per Game	0.226

Category	Percentage
Woves	85.57 %
Wrong Doubles	3.35 %
Missed Doubles	6.5 %
Wrong Passes	0.80 %
Wrong Takes	3.66 %
Sand Resigns	0.52 %
Accept Resigns	0 %

This page provides some details about the errors you make.

The top part show the error per category: Moves, double, take, and resign. You can expand the latest 3 to see more detail (wrong double, missed double for instance).

Each entry shows:

- The number of decisions you had to make.
- The average equity lost per decision.
- The number of errors made.
- The number of blunders made.

- How many decisions you make on average per error (the larger the better).
- How many decisions you make on average per blunder (the larger the better).

The resign lines shows:

- The number of individual games played.
- The total equity lost in resign decisions.
- The number of errors made.
- The number of blunders made.

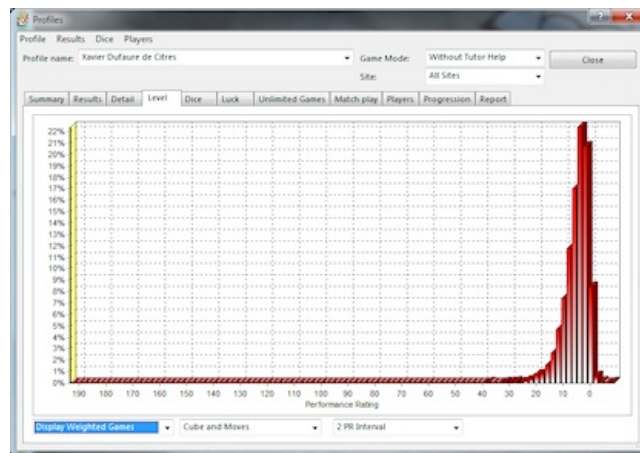
The right part of the dialogue shows the contribution for each error category.

The lower left part of the dialog shows luck related information:

- Total number of rolls for both players in the game.
- Total number of jokers you rolled.
- Total number of jokers your opponent rolled.
- Average number of rolls needed for getting a joker.
- Average number of rolls needed for your opponent to get a joker.
- The average equity gained or lost per dice roll.
- The total amount of equity gained or lost.

The very bottom part show the number of outplays you average per game.

## Level



Show the distribution of the game per level of play. For instance, here it shows that 17% of the games were played at a level between 2075 and 2125 (interval is 50 and is centered on 2100)

If cumulative curves are picked in the interval. The curve displays how many games are played with an ELO greater or equal to the horizontal coordinates. For instance, the point at 2000 shows that 62% of the games were played at 2000 ELO or greater.

The difference between game and weighted game is that the second weighs each game by the number of decisions you had to make. A 50 move game will be 5 times more important than one with 10 moves.

When displaying cube only information, games or match refers to the game or match where you had to make at least one cube decision.

## Dice

	Player	Opponent	Total
Total number of Rolls:	6,566	6,586	13,152
Doubles Ratio:	16.464%	17.568%	17.016%
Average Pip:	8.122	8.160	8.141
Actual Entering Ratio:	64.212%	66.597%	65.320%
Expected Entering Ratio:	64.026%	67.546%	65.661%
Doubles Ratio in Race:	16.501%	17.354%	16.935%
Average Pip in Race:	8.074	8.087	8.081
First On Roll:	49.684%	50.316%	

The dice section gives you information about the dice you and your opponent have rolled so far.

### 1. Summary Page

Display a quick summary of the dice : The total number of dice rolled, the percentage of double, the average pip, the actual success rate in entering from the bar and the expected rate. It also shows the ratio of doubles during a race and the average pip.

Note that average value are 16.667% for the double ratio, and 8.167 for the average pip.

### 2. Details

Details give you a lot of numbers.

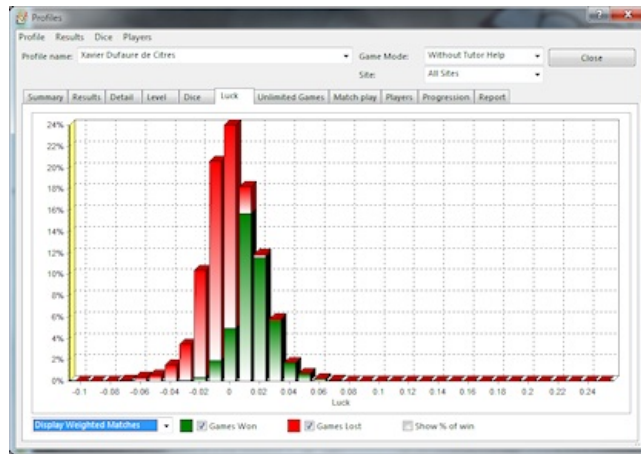
Options are

- Text/Graphical: The detail will display either as text or graphically. When displayed graphically, the average (or expected) value will be in the very center of the graph area and is symbolized by a line. The gray bar centered on this line shows the confidence interval. The bar starting from the left edge shows the actual result. If it's blue the data is in the confidence interval, red if under and green if above.
- Show Difference: (only in graphical view) when checked, the value displayed in the bar is the difference from the expected value, otherwise it's the actual percentage.
- Display: Can be total dice, player's dice, opponent dice.
- Confidence Interval: You can pick 90%,95%,99% or 99.9%. 95% is the usual value used for the confidence interval. It means that if the dice are completely random you have 95% chances that the result will be in the confidence interval. It still means that each result displayed still has a 5% chance to be outside of the interval. If you pick 99.9% you have only one chance out of 1000 that a result will not be in the interval. See statistical page for more info.
- Show Theory as: Can be a percentage or occurrence. If it's occurrence, the number displayed is simply (number of rolls)\*percentage.

### 3. Analyze

This page shows the result of the Chi-Square test. See Statistical page for more info. Values between 5% and 95% are good, smaller or larger value become suspicious. Check the [Statistics section](#) for more information about the Chi-Square test.

## Luck



This page show the distribution of games based on the luck per roll.

In green are the games won and in red the games lost. As you can see above, being lucky results in a win most of the time. The diagram above also shows that the opponent was stronger than the player who won less games when being unlucky than he lost when being lucky. The percentage of the bar at position 0 is also a very good indication who was better: roughly when luck is equal the player wins only 20% of the time.

The option "**show % of win**" will change the graph to display the percentage of match won for a given luck.

## Unlimited games

Opponent	Played v	Won	Lost	Score	ppg	Elo Perf.
• Total	1106	+1352	-1527	-175	-0.158	2029
xtremeGammon (2235)	749	+844	-1118	-274	-0.366	2052
Beginner (8433)	223	+362	-215	+147	+0.659	1964
Champion (2239)	45	+48	-71	-23	-0.511	1963
XG Roller (2262)	33	+33	-48	-15	-0.455	2035
Expert (2125)	23	+34	-29	+5	+0.217	2234
xtremeGammon [N] (2240)	20	+19	-33	-14	-0.700	1960
???? (2240)	7	+8	-9	-1	-0.143	2369
XG Roller + (2096)	4	+1	-4	-3	-0.750	1722
Degree (2336)	2	+3	-0	+3	-1.500	2086

	Total	Cash	Single	Gammon	Back.	
Score per Game:	-0.154 ±3.337	+578 -672	+337 -339	+129 -231	+58 -97	+4 -5
Points per Game:	2.383 ±2.056	-227 -234	-222 -234	+5 -0		
Points per Win:	2.408 ±2.273	-265 -357	-100 -85	+115 -184	+47 -86	-3 -2
Points per Lost:	2.357 ±1.768	+65 -66	+11 -13	+46 -40	+7 -10	-1 -3
Winning Streak:	9 games, 32 pts.	Cube at 8	+17 -15	+2 -7	+11 -7	+4 -1
Losing Streak:	9 games, 30 pts.	Cube at 16	+4 -0	-2 -0	-2 -0	

This page shows the detail of the unlimited games you've played.

For each opponent the grid shows:

- Number of games played.
- Number of points won.
- Number of points lost.
- Current score.
- Average score per game (ppg).
- ELO performance against that player.

The bottom left section give some statistics displayed as mean±standard deviation

If you select the total line of a particular player and click on get details, the right bottom grid will be populated. It shows the number of games won and lost (+won - lost) based on the outcome (cash (one player doubled and the other dropped), single game, gammon, backgammon) and the cube value (1, 2, 4 etc.)

Note that if you play with the Jacoby rule, as shown in the image above, you should not have won all the games with the cube at 1. It should be cashed, if not one of the players forget to double after a long time!

## Match Play

Summary	Results	Detail	Level	Dice	Luck	Unlimited Games	Match play	Players	Progression	Report
All Variations	Total	1 point	3 points	5 points	7 points	11 points	25 points			
	+1146 -1624	+308 -367	+491 -712	+199 -279	+62 -104	+78 -145	+8 -17			
Overall (Elo=2213)	41.37%	45.63%	40.81%	41.63%	37.35%	34.98%	32.00%			
	2056	2048	2037	2081	2068	2057	2039			
eXtremeGammon (Elo=2245)	+846 -1245	+136 -230	+419 -626	+135 -196	+46 -77	+59 -115	-1 -3			
	40.46%	44.93%	40.10%	40.79%	37.40%	33.91%	25.00%			
	2061	2063	2038	2095	2071	2065	2049			
Expert (Elo=2118)	+93 -112	+37 -40	+7 -11	+21 -28	+13 -16	+11 -14	+2 -3			
	45.37%	48.05%	38.89%	45.02%	44.83%	44.50%	40.00%			
	2039	2050	1897	2042	2047	2052	2049			
XG Roller (Elo=2261)	-71 -98	+43 -56	+19 -30	-7 -8	+1 -0	+1 -4				
	42.01%	43.47%	38.78%	46.67%	100.00%	20.00%				
	2069	2011	2032	2232	N/A	1897				
Champion (Elo=2218)	+53 -80	+14 -17	+9 -12	+18 -28	+2 -3	+5 -9	+1 -1			
	39.83%	43.16%	42.86%	39.13%	40.00%	35.71%	31.25%			
	2068	2048	2074	2047	2087	2064	2081			
XG Roller+ (Elo=2261)	+12 -35		+4 -9	+7 -17	+0 -8	+1 -3				
	25.53%		30.77%	29.17%	0.00%	50.00%				
	1837		1814	1938	N/A	2060				
Professional	-21 -25	+7 -8	+14 -17							
	45.65%	46.67%	45.58%							

This page shows the match play performances per opponent and per match length.

Result in red are the ones with a performance 50 points more less than the total performance. The ones in green are 50 or more points better than the average.

The box **Group imported game** allows you to display either all games imported together or breaks the result per player (to associate 2 opponent nicknames in order to see your result aggregated see the [nickname mapping](#) dialog).

**Sort by** allows you to sort the result per player name, number of games, or performance.

**Lowest/Highest ELO** The lowest ELO is the the lowest ELO you've had since your actual ELO reached your performance. If you have not yet reached your performance this entry will be N/A.

## Players

Player:	EXPERT	EXPERT	Xavier Dufaure de Citres
Match played:	195		2053
Average Elo:	2118		2053
Level (Based on Analysis):	2.41 World Champ.		6.40 Expert
Level (Based on Results):	2039		2132
Level (Based on Results+Luck):	2183		1988
Played Better than opponent:	93.4%		6.6%
Average Length:	4.7	Luck: Average (+0.0030)	
Matches:	84 won, 88 lost	Should have won: 68.9 (-15.1)	
Money:	+5/23 games	Should have won: ppg=-0.160 (-8.7)	
Match length	Unlimited Game	1 point match	3 point match
Wins and losses	+5/23 games	-33 -40	+4 -7
Winning ratio and Elo	0.217 E=2234	45.2% E=1952	36.4% E=1843
Games won or lost by luck	8.661	0.35	-0.60
Luck winning ratio and Elo	-0.160 E=2045	44.7% E=1934	41.8% E=1939
Average opponent Elo	2125	2118	2124
Weight	2.78%	8.83%	3.99%
Outplays Opponent	0.00%	17.81%	9.09%

The player page show your result per opponent or for all of your games.

You can filter per variation and you can include (or not) unrated games.

It uses the analyzed result to compute level of both players based on:

- Analyze
- Results
- Results + luck (also called luck variance reduction)

It also show the percentage of games where you outplay the opponent (based on the analysis)

## Match play

The second section show the average luck against the opponent in normalize equity. Below is displayed the number of games won and the the number of games that you should have won based on the luck analysis.

The grid displays the breakdown per match length. From top row to bottom:

- Wins and loses: displayed as +Win -Lose
- Winning ratio and ELO performance
- Total luck in match winning chances
- Winning ratio and ELO performance corrected by luck
- Average opponent ELO
- Percentage of games where you outplay that opponent.

## Unlimited games

The second section show the average luck against the opponent in normalized equity. Below is displayed the current score and luck corrected score. Also displays the actual points per game and luck corrected points per game.

## Progression



This page shows the progression with time.

You can display the overall performance, the checker play performance, or the cube play in one or any combination.

Skip first decision allows you to remove the first game you played from the display (but not from the calculation). The reason is because at the beginning the performance varies very fast up and down. Setting that value to 5000 will usually remove this erratic part of the curve.

Show only the last result allows you to see only the latest part of the curve

You can also display results per Week, Month, Quarter or Year.

# Report

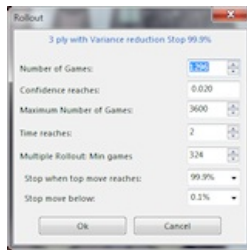
The screenshot shows a software window titled 'Profiles' with a 'Results' tab selected. The window displays a report for a profile named 'Kater Dufaire de Citres'. The report is organized into three main sections: Main Statistics, Match Play, and Unlimited Games. At the bottom, there are checkboxes for 'Include Computer Players' and 'Include Unrated Games', a 'See Top' link, and a 'Copy To Clipboard' button.

Section	Category	Value
Main Statistics	Overall Level	5.68 Expert (0.0113)
	Checker Play	5.40 Expert (0.0108)
	Cube Play	7.70 Advanced (0.0154)
	Average Luck	Insignificant (0.0000)
Match Play	Wins and Losses	1196 won, 1604 lost
	Performance	2062
	Performance (Luck Corrected)	2050
	Should have won	1179.4 (18.6)
	Outplay Ratio	3.5%
	Average Match Length	4.02
Unlimited Games	Score	-375/1106 games (-0.158 ppg)
	Performance	2094
	Performance (Luck Corrected)	2090
	Should have won	354.3 (LA) 31.1A 192.0000



# Prompt Rollout

If the option "Prompt before Rollout" is checked, this dialog is displayed when you require a rollout



This allows you to pick the main settings for your rollout. The previous image show the maximum number of prompts you might have to enter.

The entries are:

- Number of games: Minimum number of games to roll (always displayed)
- Confidence Reaches: Analysis will stop if the confidence interval reaches that value.
- Maximum number of games: Rollout will stop when this number is reach even if the confidence request is not reached.
- Time reaches: Rollout will stop after this number of minutes.
- If you have multiple games selected and have selected the options to stop rollout if a move is clearly bad, you will have the following extra options:
  - Minimum number of games before the criteria takes affect
  - Stop when top move reaches X%
  - Stop move below Y%.

# Quick Start

When first starting eXtreme Gammon, you will see this dialog which allows you to quickly start a game.



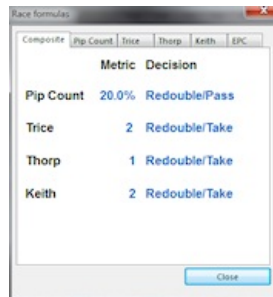
The different options are"

- New Unlimited games: In unlimited games you play as many game as you wish. The score accumulates as the games go on. See: [Starting a game](#) for more information
- New Match: Matches are usually an odd number of points. The longest match you can play in eXtreme Gammon is 51 points See: [Starting a game](#) for more information
- Game Transcription: Start a game transcription. See: [Transcribe a game](#) for more information
- Setup a position: You can manually set the checker positions, the cube, the dice to be played etc. It allows you to analyze a particular position or to start a game from the position entered. See: [Setup a position](#) for more information
- Open a saved game: Allows you to reopen a saved game. If the game is still in progress it will bring you to the end of the game. Otherwise the game opens at the beginning and you can review it (see Game navigation).
- Recent Games: A submenu opens with the last 10 games you opened or saved. Choose any of the menu entries to open the selected game. Note that the game opened will be moved to the top of the list.
- Import a game: Open a save game from a online site (Such as the GameSite 2000 Online Backgammon site: GammonSite ([www.gammonSite.com](http://www.gammonSite.com)) ) See: [Import a game](#) for more information
- Import the last game: Open the last game you played online. It scans all folders of known games to find the most recent one. See: [Import a game](#) for more information
- No Action: Close this window without any action.

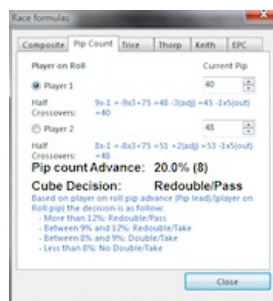
The Tip of the day displays at the bottom. Uncheck **Show Tip of the day at startup** if you don't want it. Press **next tip** to see the next tip.

# Race Formulas

The race dialogue shows either the pip count, the Throp count, the trice count, the Keith count, or the Effective Pip Count (EPC).



## Pip Count



The pip count is simply the amount of pips each player needs to roll to bear off all his checkers. For instance in the initial position the total pip for each player is 167:

- 2 checkers on the 24 point:  $2 \times 24 = 48$
- 5 checkers on the 13 point:  $5 \times 13 = 65$
- 3 checkers on the 8 point:  $3 \times 8 = 24$
- 5 checkers on the 6 point:  $5 \times 6 = 30$
- Total is  $48 + 65 + 24 + 30 = 167$

Knowing the pip count is very important during a race as it affects the cube. As a rule of thumb, you should double if your pip lead is more than 9% of the trailing pip. You can take if this ratio is less than 12%.

The pip count dialogue includes the Half-Board Count (Developed by Douglas Zare: Half-Crossover Pip count).

This is a nice way to quickly count the pips: Divide each board in half. Each checker in the first part of your outer board counts for 1, checkers on the second part of your outer board count for 2. Increase the cost of each by 1 for each half board.

In the initial position for instance:

- 2 checkers on the 24 point:  $2 \times 6 = 12$
- 5 checkers on the 13 point:  $5 \times 3 = 15$
- 3 checkers on the 8 point:  $3 \times 1 = 3$
- 5 checkers on the 6 point:  $5 \times 0 = 0$
- total is  $12 + 15 + 3 = 30$

You can already get an idea if you are ahead in the race by comparing your half crossover (HC) to your opponents. To get an estimation of the pip count multiply your HC by 3 and add 75. In our case it gives  $30 \times 3 + 75 = 90 + 75 = 165$ .

To get the exact pip use the following correction. Each checker in the 1st point of each half board counts for -1, each checker on the 3rd point of the half board counts for +1. Add this correction to the total above to get the exact pip count.

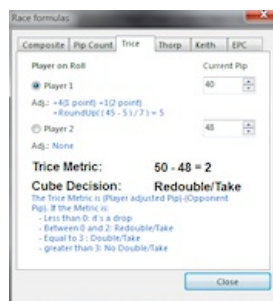
In the initial position

- 2 checkers on the 24 point:  $2 \times +1 = +2$
- 5 checkers on the 13 point:  $5 \times (-1) = -5$
- 3 checkers on the 8 point:  $3 \times 0 = 0$
- 5 checkers on the 6 point:  $5 \times 6 = +5$
- Total is  $2 - 5 + 5 = 2$

So the pip count is  $165 + 2 = 167$

Note: The half crossover is not very easy to use when you have some checkers off. When you have checkers on the bar, count them as if their board weight was 7 and add 1 to the adjustment per checker.

## The Trice count (Developed by Walter Trice)

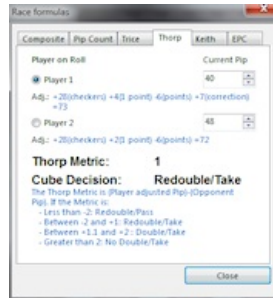


A very good count for the long race.

To calculate the Trice count of the player on roll:

- Take the pip count
  - Add two pips for every checker a player has more than his opponent
  - Add 2 pips for every checker over 2 on the 1 point
  - Add 1 pip for every checker over 2 on the 2 point
  - If a player has fewer occupied points than his opponent, subtract 1 pip for each extra occupied point
  - Add  $\frac{1}{2}$  pip for each checker outside the home board
  - If under 62
    - remove 5
    - divide by 7
    - round down
  - If above or equal to 62
    - divide by 10
    - add 1
    - round up
  - This gives you the adjustment, remove that number from the pip count
  - Remove the opponent's raw pip count
- 
- If less than 0: drop
  - between 0 and 2: Redouble/Take
  - 3: double/take
  - Greater than 3: No double/Take

## The Thorp count



The pip count is easy to use in bearing off but doesn't take into account the checker distribution. The Thorp count is good way to account for distribution.

To calculate the Thorp count of a player:

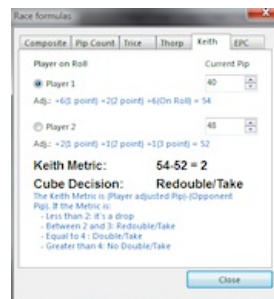
- Take the pip count
- Add 2 per checker still on the board
- Remove 1 per point with at least one checker
- Add 1 per checker on the 1 point.
- ONLY FOR THE PLAYER ON ROLL: Add 10% of your current total if it is more than 30.

Then subtract your opponent's count to yours:

- If greater than 2: Do not double
- If it is 2 : Double only if the cube is center, The opponent should take
- If it is 1 or 0: Double or Redouble, The opponent should take
- If it is -1 or less: Double or Redouble, The opponent should drop

Note: The Thorp count is designed for unlimited games and need to be used with caution in match

## The Keith count



The Keith count has been developed by Tom Keith <http://www.bkgm.com/articles/CubeHandlingInRaces/> based on trial and error in a very large number of position. It gives excellent results.

To get the count

- Take the pip count
- add 2 pips for each checker more than 1 on the one point;
- add 1 pip for each checker more than 1 on the two point;
- add 1 pip for each checker more than 3 on the three point;

- add 1 pip for each empty space on points four, five, and six.
- Increase the count of the player on roll by one-seventh (rounding down).
  
- A player should **double** if his count exceeds the opponent's count by no more than 4.
- A player should **redouble** if his count exceeds the opponent's count by no more than 3.
- The opponent should **take** if the doubler's count exceeds the opponent's count by at least 2.

## The EPC

	Player on Roll	Opponent
Pip Count	40	40
EPC	55.5	59.4
Wastage	15.5	11.4
Bear off in		
• 1 turns	0.00%	0.00%
• 2 turns	0.00%	0.00%
• 3 turns	0.00%	0.00%
• 4 turns	0.24%	0.16%
• 5 turns	5.23%	3.20%
• 6 turns	27.97%	17.00%
• 7 turns	48.56%	36.89%

The EPC (effective Pip Count) relies on the bear off database to get the exact number of rolls it takes, on average, to bear-off.

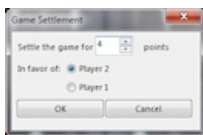
As the average pip on a roll is 8.166666667, the EPC is (average number of roll)\*8.166666667 .

The panel shows, the pip count, the EPC, the wastage (Pip count \* 8.1666-EPC) and the chances for each player to bear off in N rolls.

By default eXtreme Gammon comes with a bear off database up to the 6 point, you can create larger one using the menu [Analyze>bearoff database](#)

# Settlements

This option is available only in unlimited games and only if the cube has reached 8 or more.



You can propose to settle the game to avoid big point swings. Let's look at the following position:



You have 72.22% chance to win and should double to 16, The computer will accept as it has more than 25% chance to win. The average points you will win is  $16 \cdot 0.722 - 16 \cdot 0.2778 = 7.110$ . If you'd rather not take the chance that you might roll a 1, you can propose to settle for 7 points.

Note: In that case you will be charged with a small mistake of 0.0138 normalized equity ( $0.110/8$ ) because you gave up some equity.

eXtreme Gammon will not accept any settlement if it will lose more than 0.005 in equity (in that case it would have refused an 8 points settlement)

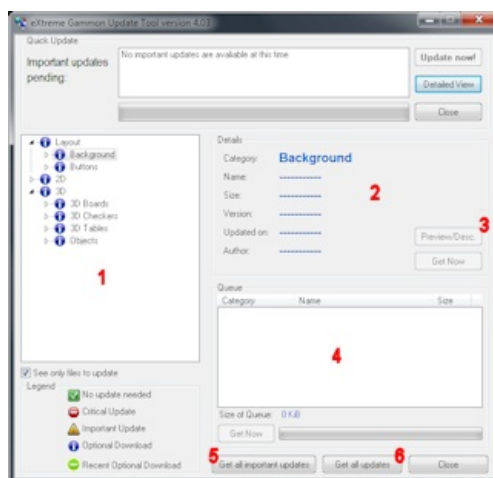
# Update Tool

The easiest way to keep extreme Gammon updated!



By default the update tool is opened in summary mode. Here you will only see the important updates.

To check optional updates, click on the "detailed view" button



1. Lists all files available for update. Highlight any item to view the details.  
**Double click** on any item to begin downloading.
2. This area will show the details of the highlighted update including: size, version, and author information.
3. The **Preview/Desc.** button will display a small image of a layout or board.  
If the update is not a graphical, it will show the details of changes or corrections.
4. **Queue** shows what is currently downloading and any other items waiting to begin downloading.
5. **Get all important updates** will download only files which are important.  
Layouts and/or boards will never be considered as important updates.
6. **Get all updates** will download all files, including all layouts and boards.



# Technical Information

- [About Rollouts](#)
- [Analyze](#)
- [Dice](#)
- [Elo](#)
- [Match Equity Table Format](#)
- [Neural Network](#)
- [Speed](#)
- [Statistics](#)
- [XGID](#)
- [XGRoller](#)
- [Camera Movement](#)
- [Luck](#)

# About Rollouts

Rollouts are an interesting way to evaluate a position. The interest is that it doesn't rely too much on the neural network so it can pick on the imprecision of the neural network. The draw back is that it relies on making a sample game so the results are not very accurate until a large number of games are played. As a result Rollouts are slow.

Here is a quick list of pros and cons of rollouts:

Pros	Cons
<ul style="list-style-type: none"><li>■ There is no horizon effect as the games are played to the end</li><li>■ The result is somehow dissociated with the neural network output</li><li>■ It takes better into account cube vitality</li></ul>	<ul style="list-style-type: none"><li>■ It can take quite long to get accurate results</li><li>■ When using 1-ply evaluation for the cube, some decisions can be wrong and if such positions happen rather quickly from the initial position the result may be not accurate.</li></ul>

## Variance Reduction

Variance Reduction is a system where the luck of each roll is calculated and added to the final result.

Each game will take longer to evaluate (for instance, for a 1-ply rollout, each position needs to be evaluated in 2-ply to determine the luck of each roll, so the rollout will take about 21 times longer).

On the other hand, because the results of each game will be very close, the standard deviation will be much smaller and fewer games will be needed.

For 3-ply rollout, the option drastically reduce the time necessary to reach a statically significant result and you should use it systematically. For 1-ply rollout, the extra cost to do a 2-ply analyze for after each roll make it not as interesting, however you can get a 15% improvement on time.

## Levels

As it was describe in the cons list, the major problem of Rollout in 1-ply is that the computer can make inaccurate decisions in 1-ply. Even though it can happen for checker decisions, it is much more common with doubling. If you want to rollout a position and think that you are in such a position, you can use some other standard settings. A setting like "close cube action" will use 3-ply analysis for the first three cube decisions.

# Dice

By far, the most recurrent issue about backgammon programs or backgammon servers is the dice.

On a backgammon server, because it doesn't involve one player, there is not much the server can do to prove that the dice are random. But for backgammon software it is possible to prove it. eXtreme Gammon includes such a feature: external dice.

Let's review the 2 controversial issues involving dice:

1. They are not distributed randomly
2. The computer cheats by either choosing the dice it wants or checking the dice in advance (before a double decision for instance).

## 1. Randomness

The uses of the external dice DLL allows you to assess both issues. You can make this DLL in any language you want by following these very simple guidelines:

- The DLL needs to export one function called DICE that returns an integer (32 bits signed) containing the 2 dice, as of  $Dice1*8+Dice2$
- The function needs to be declared in Standard call mode (also known as PASCAL or WINAPI)
- Do NOT sort the dice: At the beginning of the game, the dice are use to determine who will start. If you always put the largest roll 1st, the top player will always start.

Note if the function returns a incorrect dice value, the program will immediately switch back to the internal dice (and notify you it did so)

You can use whatever algorithm you want in this DLL. This totally address the randomness of the dice.

Example of Dice functions:

Pascal	<pre>Function Dice : Integer; stdcall; Var D1,D2 :integer; Begin   //Get the Dice   D1 := random(6)+1;   D2 := random(6)+1;   //result is both dice (D1*8+D2)   result := D1*8+D2; end;</pre>
C	<pre>__declspec( dllexport ) int Dice(void) {   int d1,d2   d1 = rand(6);   d2 = rand(6);   //Result is both dice as D1*8+D2   return d1*8+d2; }</pre>

There are 3 examples of DLL in the "Dice DLL" folder:

DLL name	Language	Description
MT19937.dll	Ansi C	by Takuji Nishimura and Makoto Matsumoto. <a href="http://www.math.sci.hiroshima-u.ac.jp/~m-mat/MT/emt.html">http://www.math.sci.hiroshima-u.ac.jp/~m-mat/MT/emt.html</a>

		Excellent RNG with a period of 2 <sup>64</sup>
DiceLib.dll	Dephi (version 3 or +)	This example uses Borland RNG. It shows how to implement a delay in the release of the dice.
RandomOrg.dll	Delphi (version 7 or +)	Connect to <a href="http://www.random.org">www.random.org</a> to retrieve dice.

## 2. Cheating

You can also use the DLL to address the cheating issue. My suggestion is that you add a visual interface to your DLL, a little top most dialogue will do. In the dice function, add a temporization so that you can display the dice in the dialogue, but not send them back to eXtreme Gammon. Add a button that will release the dice to extreme Gammon.

This will allow you to ensure that the computer doesn't interrogate the DLL before its cube or move decision: You will NOT receive any dice request until the computer has made its move or cube decision (for a double it's easy to see as you will receive the double request and no dice will be requested until you take or drop. For a no double decision you need to check the move list, you will see that the **"Double or roll"** last entry has been replace by **"No Double"** meaning that the computer is already decided not to double and is now waiting for the dice).

This proves that the computer does not know the dice in advance.

Also include a list box where you can store all the dice generated. You can, at any time, check it and see that the dice rolled in eXtreme Gammon are only the dice you generated. This proves the computer do not choose the dice.

You will find in eXtreme Gammon folder a sub folder called **dice dll**. Several source code of DLL are included (C and Pascal). You can modify them and recompile them. You can also freely distribute them.

## 3. Conclusion

We though it was very important to fully address the dice issue both for the players sake and for our own sake. We are confident that this tool and the different dice DLL sample reach this objective.

Note that we will not provide support for recompiling these DLL. We will also limit our reply to any complaint about the dice to repeat the content of this page. We are giving players a way to make sure at 100% that the program is fair. If a player decides not to use the external dice, then they do not have any grounds to complain about the internal dice.

For the paranoid ones who thinks that the example DLL distributed with the program are generated with another code than the sample one then, recompile them or ask help from a friend who is a software developer.

## 4. Note

For rollouts, internal dice are always used to ensure normal speed. The external dice DLL may be slow or contain temporizations.

# The ELO system

## History

The ELO System was developed by the mathematician Arpad Elo in the 50's. Initially it was designed for the ATP (Tennis). But they rejected the system. Elo brought his system to the FIDE (Fédération International Des Echecs, the International Chess Federation) who adopted it. It is now widely used in many games, such as chess and backgammon, which has two opposing players.

The main concept of the ELO is that a player at a given ELO level will sometimes play better or worse, and that the distribution of his play level will follow a normal law. ELO assumed that the standard deviation from their actual level is the same for all players. In actuality this is not true, but practically it works very well.

## Details

In the ELO system, each player is rated using a score, called ELO. The higher the score the better the player.

The calculation of Dr. Elo shows that in a game between 2 players, we can predict the outcome based solely on difference of the ELO level between player. There is a single formula that from the ELO differences gives the chances of each player to win.

The actual formula is rather complicated but it can be approximated very well in the backgammon case by the following formula:

$$P = \frac{1}{1 + 10^{\frac{\sqrt{N} \cdot (E1 - E2)}{2000}}}$$

Where

- E1 is the ELO of the 1st player ,
- E2 the ELO of the Second player,
- N the match length
- P is the probability that the 1st player wins.

This formula shows that a player rated 2000 against a player rated 1800 has as many chances to win the game than a player rated 1600 against a player rated 1400.

## Backgammon

In Backgammon a player ELO will be updated after each game. A win will make a player gain points, and a loss will make the player lose points. Though the amount of point gain or lost will depend of the formula above.

The idea is that if the 2 players play 100 games and the 1st player wins  $100 \cdot P$  games as the ELO formula says, both players will not gain any ELO as they performed to the level they were expected.

So if the 1st player wins, he will gain  $(1-P)$  point and if he loses he will lose  $P$  points

In the case of backgammon the ELO won or lost is modified by 2 factors:

- The match length: if the match is longer, we want to give or take more ELO points. This is not necessary but reflects the amount of time invested in the game.
- The experience of the player

## Experience

Experience has been introduced in the ELO calculation because a player starts at an arbitrary ELO level. The experience is a mean to allow a player to reach his actual level more quickly by increasing the amount of point lost and won while his experience is still low.

A factor (K) is multiply to the amount of ELO won or lost, K is calculated by the following formula:

$$K = 5 \cdot \text{Max}(1; 5 - \frac{X}{100})$$

Where X is the player's experience

This means that with an experience of 0 the gain and loss is 5 times more ELO points than a player with 400 experience.

Once a player reaches 400 experience, the experience is simply not factored any longer in the ELO gain and loss. It is equivalent to have 400 experience or 10,000.

## Summary

The ELO formula can be summarize as

$$P = \frac{1}{1 + 10^{\frac{\sqrt{N} \cdot (E1 - E2)}{2000}}}$$

$$K = 5 \cdot \text{Max}(1; 5 - \frac{X}{100})$$

$$dElo = \sqrt{N} \cdot K \cdot (\text{Result} - P)$$

Where

- E1 is the ELO of the 1st player
- E2 is the ELO of the second player
- N the match length
- X is the experience of the 1st player
- K is the factor based on experience
- dELO is the ELO gained or lost by the 1st player

## Nackgammon

The ELO formula is slightly different for NackGammon variation:

$$P = \frac{1}{1 + 10^{\frac{N^{0.45} \cdot (E1 - E2)}{1500}}}$$

$$K = 5 \cdot \text{Max}(1; 5 - \frac{X}{100})$$

$$dElo = \sqrt{N} \cdot K \cdot (\text{Result} - P)$$

Where

- E1 is the ELO of the 1st player
- E2 is the ELO of the second player
- N the match length
- X is the experience of the 1st player
- K is the factor based on experience
- dELO is the ELO gained or lost by the 1st player

This reflect that Nackgammon is a slightly more complicated game than Backgammon.

## Unlimited games

In unlimited games, the value that representing your results against an opponent is the point per game (PPG). This is the average number of points one player will gain per game played.

It is interesting to see that the relation between ELO and PPG is very simple:

$$PPG = (E1 - E2) / 50 * 0.100$$

Where

- E1 is the ELO of the 1st player
- E2 is the ELO of the second player
- PPG is the average points per game won by player 1

NackGammon

$$PPG = (E1 - E2) / 40 * 0.100$$

Where

- E1 is the ELO of the 1st player
- E2 is the ELO of the second player
- PPG is the average points per game won by player 1

# Match Equity Table format

Match equity tables are stored in the MET folder of eXtreme Gammon (by default C:\program files\eXtreme Gammon\MET\)

If you wish to create your own here is the format eXtreme Gammon expect:

```
[Current]
Name=eXtreme Gammon
Version=1.01
Description=Used since version 0.61
Copyright=© 2007 GammonSite 2000 Ltd.

[PostCrawford]
Size=7
Data=0.50000 0.48822 0.31124 0.30335 0.18061 0.17697 0.10763

[PreCrawford]
Size=7
1=0.50000 0.68879 0.75048 0.82237 0.84617 0.89440 0.91004
2=0.31121 0.50000 0.59953 0.67539 0.74573 0.80336 0.84431
3=0.24952 0.40047 0.50000 0.57764 0.65162 0.71419 0.76378
4=0.17763 0.32461 0.42236 0.50000 0.57733 0.64364 0.69990
5=0.15383 0.25427 0.34838 0.42267 0.50000 0.56851 0.62786
6=0.10560 0.19664 0.28581 0.35636 0.43149 0.50000 0.56165
7=0.08996 0.15569 0.23622 0.30010 0.37214 0.43835 0.50000
```

- Current Section:
  - Name: Name of the MET
  - Version: A version number, increase it for each release
  - Description: A short description of the met
  - Copyright: Add here any copyright
- Post Crawford
  - Size: Number of entry in the post Crawford table
  - Data: List of equity separated by 1 space.
- Pre Crawford
  - Size: Number of entry in the pre Crawford table
  - Data: There is a line for each entry. Each line contains the equity separated by 1 space.

If the MET is less than 51 in size, all other data are interpolated from your MET.

The Post-Crawford data shows the winning chance of a trailing player. In the example above, a player trailing 4 away-1 away has a 30.335% chance to win.

The Pre-Crawford table shows the chances for a player N-away (horizontally) against a player M-Away (vertically) to win the match. For instance a player 7 away-3 away has a 23.522% chance to win.

# Technical information

How eXtreme Gammon works:

## 1. Neural network

eXtreme Gammon uses a neural network algorithm to evaluate positions. Neural networks in computer science were an attempt to mimic the way the brain works. A neural network is a big black box with a certain number of inputs and outputs. In the middle are a bunch of neurons.

In our case there is about 150 inputs based on the position and 5 outputs that give the probabilities of winning a game, winning a gammon, winning a backgammon, losing a gammon, and losing a backgammon.

A neural network needs to be trained in order to work: Using the "biological" terminology the input neurons are connected to all the middle neurons by an axon, then all the middle neurons connect to the output by an axon.

A neuron works as follows:

- It receives signal from all input neurons, the larger the axon the stronger the signal.
- Those signals are totaled
- Depending how close to the threshold of the neuron the signal is amplified or lowered...
- Then the neuron sends this signal to all the output neurons.

The resulting signal in the output is the final result.

Training consist in feeding the neural network with inputs and compares the resulting output to known values and then adjusts axon size and thresholds to make the output fit closer to the expected values. Note: It mean that the neural network can forget what was learned before.

This kind of algorithm is very efficient for backgammon, though it has some limitations

- Unusual positions might not be evaluated correctly as the neural network was not trained extensively on these.
- It doesn't take into account tactical motifs (for instance it will not see a 1/1236 sequence of dice that is the only losing one)
- The result is cubeless
- The 5 results are not directly usable and need to be combined to have a single value for the evaluation

## 2. Cubeless equity

A. In unlimited games, the value of the position is called equity. It represents how many points the player on roll will win (or lose) per game. As a gammon is worth 2 points and a backgammon 3, the equity is

$$E = (\text{Single game win}) \cdot 1 \cdot \text{cube} + (\text{gammon win}) \cdot 2 \cdot \text{cube} + (\text{backgammon win}) \cdot 3 \cdot \text{cube} - [ (\text{Single game lose}) \cdot 1 \cdot \text{cube} + (\text{gammon lose}) \cdot 2 \cdot \text{cube} + (\text{backgammon lose}) \cdot 3 \cdot \text{cube} ]$$

B. In match play, the value of the position is the chance to win the match from the current score in that position. In match play, a gammon might be useless (for instance you need only one point to win the game). Thus the above formula doesn't work.

Match winning chances (or MWC) can be calculated using the match equity table (MET). A match equity table contains the chances to win the game for a particular score. The MWC of the position is then a linear combination of the all the different events. For instance, in a 5 point match where the player on roll leads 1-0 the MWC is

$$\text{MWC} = (\text{single game win}) \cdot \text{MET}(2,0) + (\text{gammon win}) \cdot \text{MET}(3,0) + (\text{backgammon win}) \cdot \text{MET}(4,0) + (\text{Single game lose}) \cdot \text{MET}(1,1) + (\text{gammon lose}) \cdot \text{MET}(1,2) + (\text{backgammon lose}) \cdot \text{MET}(1,3).$$



Where MET(a,b) is the match winning chances at the beginning of the a game with the score a,b

### C. Normalize equity

In unlimited games the normalize equity is the equity divided by the cube value. So a single game win will be represented by 1 no matter the cube value.

For match play this normalize equity is more complex: It is a linear interpolation between -1 for the MWC corresponding to a loss and +1 for a MWC corresponding to a win.

## 3. Cubefull equity

The position of the cube is very important in backgammon. Holding the cube is an asset and gives the holder an extra chance to win the game. Due to the work of Janowski there is ways to convert cubeless equity into cubefull ones.

In eXtreme Gammon the Janowski formula has been extended to apply also in match play. The cubefull equity is the base evaluation used in the extreme.

A cubefull equity of +1 means the player will win the game for sure, either by bearing off all checkers or by doubling out the opponent.

## 4. The plies

As stated in the first paragraph, the neural network might not be very accurate in a few positions. To reduce that problem a recursion method is used: Plies.

A 1 ply evaluation means the evaluation is the direct result of the neural network. Making a 2 ply evaluation means that the computer will, for each 21 possible rolls, take the following actions:

- Check the best move
- Evaluate in 1 ply the resulting position

The 21 results are then gathered and averaged (with a weight of 2 for non double and 1 for double). This average is the 2 ply evaluation of the position.

For any subsequent depths, the system is the same : a N ply evaluation is the average of all (N-1) ply evaluations of the 21 possible rolls.

The branching factor is thus 21: the number of positions to evaluate by the neural network increased by 21 for each ply.

depth	Positions evaluated
1 ply	1
2 ply	21
3 ply	441
4 ply	9,261
5 ply	194,481

This means that a 5 ply evaluation will be about 200,000 times longer than a 1 ply!

A very good depth for backgammon is the 3 ply: For cube action this means the computer will check all the possible moves the player can make and then all the opponent's replies.

Of course the deeper the ply the more accurate the position.

Sampling method: To reduce the branching factor, a sample of the 21 possible dice can be used. eXtreme Gammon 3 ply red uses a sample of 7 dice thereby reducing the evaluation time by a factor of 3.

## 5. Make the computer play at lower level.

Because even the 1 ply is quite a strong opponent even though the evaluation is almost instantaneous, some extra works needs to be done to make the computer play at lower level.

If the computer is set to a low level the evaluations are made as follows:

- Get the 1 ply evaluation.
- Add a random value to the evaluation: i.e. noise.

The noise distribution used is a normal distribution around 0 with a standard mean base on the current value and the level (the lower the level the higher the standard mean).

## 6. Conclusion

The combination of the neural network and the plies make the evaluation of a position very accurate and explains the strength of the program. There are also other advantages a computer has: It's never tired or distracted. Though computers also have limitations such as unusual positions or the horizon effect.

# Speed, multi-threading

eXtreme Gammon almost exclusively uses the FPU (floating point unit) part of the processor.

The speed of eXtreme Gammon's analyze (or play) directly depends on the CPU speed. It means that a 2 GHz processor will compute twice as fast as a 1 GHz processor.

The number of positions evaluated per second is roughly given by the formula:

- For an Intel Core i7:  $\text{PosPerSecond} = 631 \times (\text{Processor frequency in MHz})$
- For an Intel Core Duo Processor:  $\text{PosPerSecond} = 209 \times (\text{Processor frequency in MHz})$
- For an Intel Pentium 4 HT:  $\text{PosPerSecond} = 66 \times (\text{Processor frequency in MHz})$
- For other Intel Pentium 4's:  $\text{PosPerSecond} = 57 \times (\text{Processor frequency in MHz})$

## Multi-thread

eXtreme Gammon uses 3 Threads:

- One for playing with normal priority
- Two for analyzing, with low priority for one, very low priority for the other.

This means that when you play against the computer, the analysis is done automatically in the background so it doesn't slow down the play.

When analyzing a game, the fact that both threads have low priority prevents eXtreme Gammon from taking precedence from other tasks. So you can let eXtreme gammon analyze and run other programs without causing a slow down. It will only use CPU time when your current foreground application is not doing anything.

### The 2 analyze threads:

The low priority one is used when you explicitly request the analysis of one position or cube action (i.e. when you click on the ply icons in the analyze tab). The lowest priority one is used when analyzing in the background during the game or when you request a game or match analysis.

So if you have an analysis in progress and want to analyze a move deeper it will take precedence over the rest of the analysis.

Notes:

- When you request an analysis of one particular move by clicking on the ply icon in the analyze tab, it sends the analysis to the medium priority thread. If you have 2 processors you can send another analysis to the second analysis thread by holding the ALT key down when pressing on the ply button. This way both of the analysis' will run simultaneously.
- If you use the tip above don't split a rollout for the same move between the threads. The results will override each other. You can run 2 rollouts at the same time but they need to be of 2 different positions.

# Statistics

Backgammon programs rely on very strong statistical principles. Analyzing results or dice also requires statistical knowledge.

eXtreme Gammon makes all the calculation for you so you don't need to understand the underlying mathematics. If you are interested, this chapter briefly describes different statistical concepts.

## Average:

When one has the result of an experiment, the average value can be calculated by adding all the results and dividing by the number of results. For instance your population is (3,5,6,8,4) the average is  $(3+5+6+8+4)/5=5.2$ .

## Standard Deviation:

The standard deviation describes how close the population is from the actual average. For instance the population (3,5,6,8,4) has a standard deviation of 1.92 and the population (4,5,6,7,4) has a deviation of 1.30. Both have the same average (5.2) the deviation shows that the second population is distributed much closer to the average than the first one.

Note that the standard deviation of independent events having a probability  $p$  of appending is  $\sqrt{p-p^2}$

## Binomial distribution

Let's assume you are making an experiment with 2 dice. You roll them 20 time and count the number of doubles. Your result is 6 doubles. You want to know if this result is statistically possible.

The distribution of  $N$  independent events that have a probability  $P$  to occur is described by a binomial distribution.

A formula gives you the chances to have  $M$  success.

Here are the results for success between 0 and 10 (over 10 chances are under one out 10000)

0	2.6%
1	10.4%
2	19.8%
3	23.8%
4	20.2%
5	12.9%
6	6.5%
7	2.6%
8	0.8%
9	0.2%
10	0.0%

This means that you had 10.4% chance to roll only 1 double, 19.8% to roll 2 doubles etc.

You know that the chances to roll a double is one out of 6 so you were expecting about  $20/6=3.33$  double so either 3 or 4. You have almost twice this value. Does that mean your dice are not working right?

Well if you look at the table you see that you still had 6.5% chance to roll 6 double, additionally your result could have been worse and you could have roll 7 or more. So you chances to roll 6 or more double is  $6.5+2.6+0.8+0.2=10.2\%$

10% is quite a lot, so it is not unusual to have rolled 6 doubles (usually the threshold of 5% is used) so you surely cannot conclude that your dice are not right.

Note that you can never prove the dice are random, you can be confidence enough they are but you can never be 100% sure.

## Normal distribution

Binomial distributions reflect the distribution perfectly but they are quite cumbersome to manipulate. When the number of experiments grows the binomial distribution behaves like a normal distribution.

Normal distributions are the very classic bell shape distribution and are characterized only by their mean and standard deviation.

## Confidence interval

A confidence interval is a way to express the fact that an actual result will very likely not be exactly what is predicted. The confidence interval shows the range for the likely result. For instance a 95% confidence interval shows that there is a 95% chance that the result will be in this interval. For a normal distribution the confidence interval at 95% is  $1.96 \cdot \text{stdev} / \sqrt{N}$  where N is the size of the sample.

If you have 1000 rolls and check the number of doubles.

The probability of the event is  $1/6$

The standard deviation is  $\sqrt{1/6 - 1/36}$

The average number of doubles is 166.67 or 16.67%.

The confidence at 95% is  $1.96 \cdot \sqrt{1/6 - 1/36} / \sqrt{1000} = 2.309\%$

So this means that you have a 95% chance to get between  $16.67 - 2.309 = 14.36\%$  and  $16.67 + 2.309 = 18.98\%$  doubles

Out of 1000 rolls there are between 1436 and 1898 doubles

If the sample is 10000 the interval becomes 15.94%-17.40%

If the sample is 100000 the interval becomes 16.44%-16.90%

## Chi-Square test

The chi-square test is the standard procedure to verify if a distribution is random. Let's assume you check the distribution of dice (number of 1,2,3,4,5 or 6) you can check each of the 6 result and check if they are in the confidence interval but it's still gives you 6 answers (good or not good). Moreover these results are very depend of each other (if you have plenty of 5's for instance, it's more likely that you will have less 1,2,3,4 and 6 than expected). The chi-square test takes your entire sample and reduces it to one characteristic, the chi-Square, that is the sum of the square of the

difference in percentage between the actual and expected value

Then this Chi-Square is compared to the one of the mathematically random distributions (given by a table). The final result is the chance the actual chi-square is larger than one of a random distribution

The results are interpreted as follows:

- Between 0% and 1%: Distribution is surely not random
- Between 1% and 5%: Distribution is suspicious
- Between 5% and 95%: There is no way one can conclude this distribution is not random.
- Between 95% and 99%: The distribution appear to be too good
- Between 99% and 100%: the distribution is not random

About too good distribution: Let's assume you have a bag with 600 balls. 100 of each having a number 1,2,3,4,5 or 6. You draw a ball and don't put it back in the bag. After 300 picks you will be likely to have about 50 of each number but as you pick more and more balls, the proportion of each number will inevitably go closer to 16.666% to reach exactly that value when you pick the last ball, you will have had exactly 100 times each number. This is NOT random and the chi-square will return a value of 100%. It means that each experimental result (the draw of a ball) is not independent.

If you put the ball back after drawing it, then the experiment would be random.

# XGID

When you Copy a position using CTRL+C it generates both the board and a game identifier: XGID.

```
XGID=-a-B--E-B-a-dDB--b-bcb----:1:1:-1:63:0:0:0:3:8
```

```
Score is X:0 O:0 3 pt(s) match.
+13-14-15-16-17-18-----19-20-21-22-23-24--+
| X  X          O  | | O  O  O  | |
| X  X          O  | | O  O  O  |
| X              | |   O  |
| X              | |   |   |
|              | |   |   |
|              | | BAR |   |
|              | |   | X  |
| O            | |   | X  |
| O            | |   | X  |
| O            | |   | X  | +----+
| O            X  | |   | X  | X  | | 2 |
| O            O  X  | |   | X  | X  | O  | +----+
+12-11-10--9--8--7-----6--5--4--3--2--1--+
Pipcount  X: 132  O: 142 X-O: 0-0/3
Cube   : 2, X own cube
O to play 63
```

When importing a position using CTRL+V you can only import the line with the ID (note that you need to copy also the part "XGID=...")

Each field is separated by colons. Here is the description of the different parts of the ID:

## 1 Position -a-B--E-B-a-dDB--b-bcb----

- There are 26 characters.  
the **1st one** represents the checkers on the bar of the top player.
- The **next 24** represents each point from 1 to 24 (using the bottom player's perspective).
- The **last** character is the checker on the bar of the bottom player

Each character shows how many checkers are on the point and of what color.

- **a dash** shows an empty point
- **'A' to 'P'**: denotes checkers of the bottom player. **A** means 1, **B** means 2 etc..
- **'a' to 'p'**: denotes checkers of the top player. **a** means 1, **b** means 2 etc..

2 **Cube** 1 the cube value is 2<sup>cube</sup>. So

- 0 => Cube=1
- 1 => Cube=2
- 2 => Cube=4
- 3 => Cube=8
- etc..

3 **Cube Position** 1

- **1** Cube is owned by the bottom player
- **0** Cube is centered
- **-1** Cube is own by the top player

4 **Turn** -1

- **1** if it is the bottom player's turn
- **-1** if it is the top player's turn

5 **Dice** 63

- **00** player is to roll or double
- **D** player has double, opponent must take or drop
- **B** player has doubled, the opponent beavered,

- **R** player has doubled, the opponent beavered and the player racconed.

- **xx** player has roll the field contain both dice (11,35, etc..)

6 **Score 1** 0 Score of the bottom player 7 **Score 2** 0 Score of the top player 8 **Crawford, Jacoby** 0

- Match play: 1 means the current game is Crawford, 0 means the current game is not played with the Crawford rule.

- Unlimited games: the value is a Jacoby+2xBeaver:

- **0** : No Jacoby, no Beaver

- **1**: Jacoby, no Beaver

- **2**: No Jacoby, Beaver

- **3**: Jacoby and Beaver

9 **Match length** 3 Length of the match, 0 for unlimited games 10 **Max Cube** 8 Maximum value of the cube (2^value so here 2^8=256)



# XGRoller

The XG Roller levels setting relies on truncated rollouts to estimate the position. This has been proven to be an extremely efficient way to analyze a position. For instance a level like XGRoller+ is much stronger but faster than a 5-ply analysis.

Here are the settings used for the different levels of XGRoller

## XGRoller

- 42 Games using VR with rotation on 21 dice
- Truncated after 5 moves using 1-ply
- All decisions in 1-ply

## XGRoller+

- 360 games with VR
- Truncated after 7 moves using 2-ply
- Stop when reaching 0.010 Confidence (minimum 180 games)
- First 2 decision in 2-ply
- Then 1-ply checker and 2-ply cube

## XGRoller++ Checker

- 360 games with VR
- Truncated after 5 moves using 3-ply
- First 2 decisions in 3-ply
- Then 2-ply checker and 3-ply cube

## XGRoller++ Cube

- 360 games with VR
- Truncated after 7 moves using 3-ply
- Stop when reaching 0.010 Confidence (minimum 180 games)
- First 2 decisions in 3-ply
- Then 2-ply checker and 3-ply cube

## Camera Move

If you are using eXtreme Gammon in 3D mode you can move quickly around the board to change your view point.

- Press the **Shift** Key and **left click** on the board. Moving the mouse left or right will turn around the board. Moving the mouse Up and down will change your elevation over the board.
- Press the **Shift** Key and **turn the mouse wheel** to move closer or farther from the center of the board.
- Press the **Shift** Key and **click on the middle mouse button** (the mouse wheel is the middle button) to restore the default camera setting.

# Keyboard shortcuts

---

Ctrl	Alt	A
Ctrl	Alt	B
Ctrl	Alt	C
Ctrl	Alt	D
Ctrl	Alt	E
Ctrl	Alt	F
Ctrl	Alt	G
Ctrl	Alt	H
Ctrl	Alt	I
Ctrl	Alt	K
Ctrl	Alt	L
Ctrl	Alt	M
Ctrl	Alt	N
Ctrl	Alt	O
Ctrl	Alt	P
Ctrl	Alt	R
Ctrl	Alt	T
Ctrl	Alt	V
Ctrl	Alt	W
Ctrl	Alt	X

## Windows

Analyze window
Board Configuration
Copy position
Dice Distribution
Export To HTML
Full Screen Board
Game Summary
Money History
Game information
Cube information
Press and hold: displays the current analyze result for the game and session
Match Summary
Normal Layout
Options dialogue
See Profiles
Race formula
Match Equity Table
Batch Rollout dialog
Configuration Wizard
Elo Calculator























---

## Actions








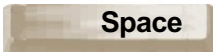
Ctrl	0	Start Rollout	
Ctrl	1	1 ply Evaluation	
Ctrl	2	2 ply Evaluation	
Alt	Ctrl	3	3 ply Evaluation with dice reduction
Ctrl	3	3 ply Evaluation	
Ctrl	4	4 ply Evaluation	
Ctrl	5	5 ply Evaluation	
Ctrl	6	6 ply Evaluation	
Ctrl	7	7 ply Evaluation	
Ctrl	8	XGroller Evaluation	

	Ctrl	9	XGroller+ Evaluation
	Ctrl	+	XGroller++ Evaluation
	Ctrl	`	Boss mode
	Ctrl	A	Analyze Match
Shift	Ctrl	A	Analyze Game
	Ctrl	C	Copy Position to the Clipboard (default setting)
Alt	Ctrl	C	Copy Position to the Clipboard
Shift	Ctrl	C	Copy XGID to the Clipboard
	Ctrl	D	Double
Shift	Ctrl	D	Stop Demo Mode
	Ctrl	E	Switch between 3 and decimals for displaying equity
	Ctrl	F	Flag a move
	Ctrl	H	Get/Play Hint
	Ctrl	I	Import a Match
Shift	Ctrl	I	Import the last Match played
	Ctrl	J	New Position
	Ctrl	L	Level of play (Press and Hold the keys)
	Ctrl	M	Toggle the display of equity or mwc
	Ctrl	N	New game
Shift	Ctrl	N	New Game (same settings than last game)
	Ctrl	O	Open a saved game
	Ctrl	P	Play from position
Shift	Ctrl	P	Print Position
	Ctrl	Q	Quit eXtreme Gammon
	Ctrl	R	Resign
	Ctrl	S	Save
Shift	Ctrl	S	Save the position
	Ctrl	T	New Transcription
Shift	Ctrl	T	Mark move to be rolled later
	Ctrl	U	Add Analyze to the players profile
Shift	Ctrl	U	Prompt to add Analyze to the players profile
	Ctrl	V	Paste Position from the Clipboard
	Ctrl	W	Close
	Ctrl	Z	Undo move
	Ctrl	]	Show Pip count




## Game Navigation

		Beginning of match
	Home	
		Beginning of game
	Home	
		Previous
	Down	
		Next
	Page Up	
		End of game
	End	
		End of match
	End	
	Page Down	
	Down	Previous Error
	Down	
	Page Up	
	Up	Next Error

## Game play

Checker		Move checker with left dice
Cube		Offer to double
anywhere		Invert dice
anywhere		Undo (if one checker has already been moved)
empty point		Move 2 checkers to this point
		Move the checker using both dice
		Pick Dice or Roll Dice

## Setup Position

		Clear board
		Set initial position
		Invert Active Player

	.....		Put 0,1,2 etc checkers to this point
			Add a checker to the point
			Remove a checker to the point
			Center Cube
			Cube at 2
			Cube at 4
			Cube at 8
			Invert cube position
Point			Put checker of player 1 up to this location
Point			Put checker of player 2 up to this location
Cube			Double the cube value
Cube			Reduce the cube value
Die			Increment the die
Die			Decrement the die

## Others

		Help
		What's this
		Switch to Free Mode
		Switch to <a href="#">Tutor</a> Mode
		Switch to Teaching Mode
		Switch to Coaching Mode
		Switch to Competition Mode
		Switch to Iron Man Mode
		Switch to Custom Mode
		Simple Mode
		Expert Mode
		Switch between Simple and Expert Mode
		Minimize in the TaskBar

# Credits

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**Designed by GameSite 2000 Ltd.  
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This program is dedicated to my step-son: [Justin Lesh](#)

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**Thanks to David Gray for his corrections of the help file**

**Part of code**

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# In Memory of Justin Lesh.

**July 12th, 1986 - April 17th,  
2005**

Wonderful Son and Step-Son. You  
are dearly missed.



Please check [www.JustinLesh.com](http://www.JustinLesh.com)  
especially if you have teenagers in  
age of Driving.

## "My Son"

Two years have gone by  
without you here.  
Not a moment has passed  
that my heart could bear.

Not seeing the face  
of my sweet boy.  
Hearing your laugh  
filled with such joy.

Remembering the jokes  
that only we understood.  
The way that you walked  
and the way that you stood.

With the tilt of your head  
with that grin  
on your face.  
Missing the warmth  
of my Son's embrace.

Hearing your voice  
as you come in the door.  
Oh, what I 'd give  
To hear you once more.

So many things that I miss  
I can't name just one.  
I miss everything  
about you  
I miss you, "My Son".

Forever In Our Hearts,  
Mom & Xavier

April 17th, 2007

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# Glossary

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

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**Ace point:** A player's 24th point (the furthest away from home)

**Ace point game:** A game where a player has anchored on the ace point and is hoping to get a late hit while his opponent bears off. Ace point game are not very efficient and a player only wins between 10 and 15% of these.

**Anchor:** A point in your opponent's home board occupied by 2 checkers.

**Anti Joker:** An unlucky roll for the player. Mathematically a roll that decreases your normalized equity by more than a set threshold. (by default 0.300)

**Automatic double (1):** In match if a player will win the match by winning the current game, the opponent best choice is to automatically double as soon as possible. For instance in a 5 point match you are trailing 3-0, the cube is at 2. Your opponent will win the match if he win the game, so you should double to 4 (it is the same to lose 5-0 or 7-0).

**Automatic double (2):** In unlimited games, players roll a dice to determine who starts. If both roll the same number the cube is turned to 2 and the players roll again. This is a optional rule and usually players will agree on a maximum number of time the cube can be turned. This rule is not implemented in eXtreme Gammon.

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**Back checkers:** The checkers which are in the opponents home board.

**Backgame:** Playing a backgame is keeping 2 or more anchors in the opponent board hoping for a late hit. Backgames rely on proper timing but can be a very efficient way to operate if you are hit too many times in the beginning of the game.

**Backgammon:** A player wins a backgammon if he bears-off all checkers before his opponent bears off any and if the opponent has still checkers in the winner's home board or on the bar. The winner scores three times the amount of the cube.

**Bar:** The middle portion of the board. Traditionally the checkers hit are put on this part of the board until they can reenter.

**Bar point:** The points at position 7 and 18. It's a valuable point as making it prevent the opponent's back checkers to escape with a 6. It also starts a prime with the 6 and 8 point initially held. Making the opponent's bar point gives an efficient holding game but often clearing the point safely can be tricky.

**Bear-in:** To move a checker in the player's home board.

**Bear-off:** To move a checker out of the game. Only possible after all the player's checkers are in his home board.

**Beaver:** Used only in unlimited games. (never in match play) A player accepts a double and redoubles immediately. The player who beavers retains control of the cube. This is more of a gambling tool to punish foolish doubles. Though there are a few rare cases where it's proper for one player to double and the opponent should beaver. (see Kauder Paradox).

**Blitz:** All attack strategy consisting in hitting your opponent in your home board even if it means leaving a blot, hoping to quickly close out your opponent. Blitzes are characterized by big swings.

**Blot:** A checker vulnerable to a hit.

**Blunder:** in eXtreme Gammon a blunder is a move or cube action that loses more than 0.080 normalized equity.

**Builder:** A checker that can be used to create a new point (thus in direct range of the point aimed)

**Cash:** Cashing is the action of giving your opponent a double he cannot accept. Thus, you get the points immediately, hence the term of cashing.

**Cash Point:** The Equity for which it is equivalent for the opponent to drop or take. For instance, if the opponent cannot redouble the cash point in a game where no gammon can occur is 0.500 equity or a 75% winning chance.

**Chouettes:** A social form of backgammon involving more than 2 players.

**Close Out:** Action to fill all 6 points of the home board with at least 2 checkers. Any opponent checkers on the bar will be blocked until the player opens a point.

**Collapse:** A collapse board occurs when a player lacks timing and has to break point and pile up checker on the lower point. Such board is usually not a threat for any captured checkers.

**Confirmation:** The act of picking up the dice finalizes the move played.

**Cost:** The cost of a modifier from the Normalized equity. In unlimited games the cost is the Normalized Equity multiplied by the cube value and represents the average number of points the player will win from this position. In match play the cost is the current match winning chances.

**Coup Classique:** An end game frequently occurs if a player is bearing-off his last checkers but has to leave a double shot (typically after rolling something like 3-1 when having only 3 checkers left on the 2 point). If the opponent is able to capture these last 2 checkers and close them out he will become a favorite to win.

**Cover a blot:** Action of adding a checker on a point containing a blot, thus removing the threat it could be hit.

**Crawford Rule:** The Crawford rule is used in match play only. It specifies that when a player is within 1 point of victory, the next game (and only the next game) will be played without the cube.

**Crawford Game:** The game in a match immediately following when one of the players is within 1 point of victory. No player can double during this game.

**Cube:** See Doubling cube

**Cube decision:** Action to double, not double, take or drop.

**Cubeless:** A cubeless equity is one that does not take into account the cube position.

**Cubefull:** A cubefull equity is one that takes into account the cube position. For instance in a position where the player owns the cube and has an 80% chance to win the game, his cubeless equity is  $0.8 - 0.2 = 0.600$  but his cubefull equity is +1.000 as he will double and his opponent will pass.

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**Dance:** Consequence of a roll where the player cannot move, even in part

**Dead Cube:** A cube is called dead when its owner can not redouble. This happens in match play when the player owning the cube will win the match by winning a single game (for instance a score of 3-0 in a 5 point match, if the cube is at 2 for the leader, the cube is dead).

**Dice:** Two six faced dice are used in backgammon. In live tournaments, printed dice are used rather than carved dice.

**Double:** A proposal to double the game. If a player takes, then the value of the game is doubled, the doubling cube becomes his property and only he can double again. If the opponent drops then he loses the current value of the game and the game ends.

**Double Match Point:** A game is called double match point (DMP) when the winner of the game will win the match. This situation arises when both players are 1 point away from winning or 2 away after a double.

**Double Point:** The equity at which a player can start thinking about doubling. In match play, the double point can be -1 for automatic double or very high (when the player has a big lead and the cube is already turned).

**Doubling Cube:** 6 faced dice use to indicate the value of the game form 1 to 64. There is no value for 1 so to indicate that the game is still worth one point the cube is put on the middle of the board, between the 2 players with 64 facing up.

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**ELO:** Rating system developed in the 1970s. It's widely used for games such as backgammon or chess. The system was developed by Arpad Elo and is based on the assumption that an ELO difference corresponds to average winning chances.

**Egyptian rule:** This rules specifies that no more than 5 checkers can be put on a single point. This rule is NOT implemented in eXtreme Gammon.

**Equity:** A numerical value which indicates how many points per game the player will win or lose on average. An equity of +1 means a sure win, -1 a sure lose, +2 a sure gammon win etc. For example, if a player can win 80% of the games, 20% of which are gammons and thus lose 20% of the games and the cube is at 2, his equity is  $E=60\%*2+20\%*4-20\%*2=1.6$ .

**Error:** In eXtreme Gammon an error is a move or cube action that loses more than 0.020 of normalized equity but less than 0.080.

**Escaping:** Moving a back checker out of the home board.

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**Fan:** Fanning is dancing from the bar.

**Free drop:** In match play, in some post Crawford games, a player can drop an automatic double at no cost: he has a free drop. Consider the score 2-1 in a 3 point match post Crawford. Your opponent will double as soon as possible. If you take, the match will be decided by the current game winner. if you drop the match outcome will depend of the next game winner. Even if your opponent has a very small advantage, let say 50.5% chances to win the game, you should drop as you have 50% to chances to win the next game. The value of a free drop is considered to be a 1.5% match winning chance at this score (2 away, 1 away).

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**Gammon:** A player wins a gammon if he bears-off all checkers before his opponent bears off any. The winner scores twice the amount of the cube.

**Gammon Price:** A way to quantifying the cost of a gammon in a match. In unlimited games a gammon is always worth 2 points. In match play a gammon can be worth only 1 point (if winning a gammon doesn't matter) or anything higher. A large gammon price means the player can afford more risk to try to win the gammon.

**Golden Point:** The points at position 5 or 20. They are the most valuable points at the beginning of the game. Making your own golden points start a prime and the closeout of your home board. Making your opponent's golden points gives you a point to enter and allows you to take a greater risk.

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**Holland Rule:** the Holland rule is used in match play (but its use is rather uncommon). It specifies a player can

not double in post Crawford games on his first role. This rule is not implemented in eXtreme Gammon.

**Holding Game:** A game where a player has a high anchor and hopes to hit his opponent when he tries to bear in.

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**Jacoby Rule:** Jacoby rule is used in unlimited games only (but not always). It specifies that no gammon can be scored if the cube is still center (no player has doubled). It prevents long dull games when a player is stuck on the bar where the opponent just trying for a unlikely (but still possible gammon).

**Joker:** A lucky roll for the player. Mathematically a roll that increase your normalized equity by more than a set threshold (by default 0.300)

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**Kauder Paradox:** Position where it is proper to double but the opponent proper reaction is to beaver. This situation can happen in unlimited games when the Jacoby rule is in use.

**Kill a number:** Play that prevents a dice roll next time to be played. This can be very useful when trying to maintain a prime with a tight timing.

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**Luck:** Luck is determined as the equity after the roll (assuming the best move is played) - equity before the roll.

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**Market Loser:** A sequence of 2 dice rolls that change the position from a double/take to a double/drop. If such a sequence arises, the player will regret not doubling. If a position has no such market loser it means it's always better to wait to double as you will always have that possibility the next turn.

**Market Gainer:** A sequence of 2 dice rolls that change the position from a "too good to double/drop" to a double/take. If such a sequence arises, the player will regret to not doubling (and cash). If a position has no such market winner it mean it's always better to wait to double and continue playing for gammon as you will always have that possibility the next turn.

**Match play:** Matches are played to a determined number of points (usually an odd number). The first player to reach that score wins the match. The final score is not important (it's the same to win a 5 point match 11-0 or 5-4). Match play requires more complex cube decisions than unlimited games.

**MET:** Stands for Match Equity Table. It contains the MWC for different match scores.

**Money play:** In this kind of game, there is no limit and points simply accumulate after each game.

**MWC:** Stands for Match Winning Chance. It is used to characterize a position in match.

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**Neural network:** An algorithm that is used when fuzzy logic is needed. Besides backgammon programs, neural networks are often used in programs that need form recognition. The main interest of the neural network is it's speed and the fact that it can handle unknown (untrained) cases. The drawback is that it needs a long training period and it acts as a black box (If the Neural network gives an incorrect answer the developer can not debug the program, and the only solutions are more training or redesigning the network with more inputs and/or outputs)

**Normalized equity:** The normalized equity quantifies the value of the position. An equity of -1 is a sure loss, 0 mean the position is even, +1 a sure win, +2 a sure gammon etc.

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**Otter:** Action to redouble a Raccoon. This is not implemented in eXtreme Gammon

**Outplay:** In eXtreme Gammon an error is a move or cube action that is better than the computer's choice by more than 0.010 normalize equity.

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**Pass:** Dropping a cube. (declining the double)

**Pip count:** The total number of points needed to bear off all checkers.

**Plies:** Backgammon software terminology for look ahead move. 3 ply means the program looks 3 moves ahead.

**Prime:** A full prime is 6 consecutive points occupied by at least 2 checkers of the same players. It's an impossible barrier to pass for any opponent checkers trapped behind it.

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**Raccoon:** The answer to the Beaver. If a player beavers, the opponent (thus the player who double initially) can Raccoon and put the cube at 8 times the initial value. There are no possible positions where the sequence double/beaver/raccoon is proper. (note there is also something called Otter that can be use to raise the cube to 16 times the initial value)

**Race:** A race occurs when each of the players' checkers are past each other and no player can hit the other.

**Redouble:** Equivalent to double but used when the player own the cube.

**Resign:** Action to resign the game. A player can resign the whole match, a single game, a gammon or a backgammon. The opponent is free to decline the resignation (though there is never a reason to decline a resignation for a backgammon or the match).

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**Settlement:** Settlements are used only in unlimited games and usually only when the cube reaches a very high value (eXtreme Gammon will allow settlement proposition only if the cube is 8 or more). A settlement is the agreement between the 2 players to stop the game and award a number of point to one of them. It allows both players to avoid big swing of fortune that can be too costly. For instance a position where a player has 2 checkers on his 4 and 2 point, while the opponent has only one checker left. The cube is at 8. The player on the roll has 19 rolls to exit and thus more than 50% chance to win and should double to 16. If the players agree they can not afford to lose 16 points on a single roll they can settle it. The fair value would be  $16 \cdot 19/36 - 16 \cdot 17/36 = 0.888$ . They can decide to settle for 1 point in favor of the player on roll. Though if the opponent does not wish to give up 0.112 point they will play out the position (If they agreed that the player losing one point would be charge with a 0.014 resign error).

**Single Game:** Winning the a single game, at the opposite of a gammon or backgammon, means the player wins the straight value of the cube.

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**Take:** Accepting the opponent's double.

**Too good to double:** Characterizes a position where the gammon chances are so high compared to the losing chance, that it is better to continue playing than sending a cube your opponent will drop (note: There are, in match play, some positions where even if you are too good to double, your opponent would take (and usually redouble you immediately).

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**Variance Reduction:** Algorithm using the luck of each rolled used to reduced the variance of rollouts.