

# US CHESS RATINGS AND TITLES

## US Chess Over-the-Board Ratings

A chess rating is a numerical estimation of one's playing strength. There are currently three over-the-board (OTB) US Chess ratings for different time controls, regular, quick, and blitz. There also two separate online ratings for quick and blitz and one for correspondence. This document gives an overview of the OTB ratings and titles, although the online ratings are calculated the same way as the OTB ratings except for the initial seeding of unrated players.

Most tournaments are regular rated and this is by far the rating the majority of players care about the most. Many players who compete in quick rated events only do so occasionally. Consequently, quick ratings are often "stale" and not an accurate representation of player's current strength. Due to this, US Chess began "dual" rating some time controls in both the regular and quick systems to increase the number of games rated in the quick system. Despite this, quick ratings are still not an accurate representation of playing strength for many players. The US Chess ratings committee is currently analyzing the possibility of having regular and blitz rated games affect a player's quick rating if the quick rating is "stale" to further improve the quick rating system. An addition to this proposal is that regular and quick rated games would affect a player's blitz rating if their blitz rating is "stale" since the new blitz system is already starting to show signs of the same issue that has plagued the quick rating system.

- Regular-only rated sections have games that have more than 65 minutes of "total playing time" for each player
- Dual rated sections have games that have between 30 and 65 minutes of "total playing time" for each player
- Quick-only rated sections have games that have more than 10 but less than 30 minutes of "total playing time" for each player
- Blitz rated sections have games that have between 5 and 10 minutes of "total playing time" for each player

To determine the "total playing time," add the base time and the increment or delay, with one second of increment or delay counting as one minute of "total playing time." For example, G/60;d5 (sixty minutes per player with a five second delay each move) adds up to 65 and thus is dual rated. The US Chess rulebook recommends having the increment or delay in force from move one. For time controls without the increment or delay in force from move one (for example, a 40/110,SD/30 game with a thirty second increment only on the sudden death time control), "total playing time" is determined as if the increment or delay was in effect from move one.

For sections with different time controls for different rounds/schedules, the following rules are in effect. If any round in a section uses blitz rated time controls, all rounds in the section must use the same blitz rated time control. If any round in a section uses quick rated time controls, all rounds in the section must use a quick rated time control. If a section has some games played at dual rated time controls and others at regular rated time controls, the section is regular rated only.

Regular, dual, and quick events must have a base time of at least five minutes and blitz three minutes. Quick and blitz events must have a single, sudden death time control. Both players must start the game with the same time.

## Rating Calculations

US Chess over-the-board ratings currently range from a minimum of 100 to around 3000. Ratings based on less than 26 games are called "provisional" ratings and ratings based on at least 26 games are called "established" ratings. Provisional ratings are generally less reliable and thus the system allows them to fluctuate more by giving them a higher "k factor" (and even more so for provisional ratings based on fewer games). Players with lower established ratings also have higher k factors than those with higher established ratings. Ratings based on eight or fewer games or when a player's previous games have been all wins or all losses are governed by a different formula called the "special rating formula". The US Chess rating system takes into account everyone's performance in the current event in computing post-event ratings. The system also awards bonus points for players who have a good performance in a section above a certain threshold. The threshold depends on the number of rounds a player plays in a section and must be at least three. Bonus points cannot be earned if you play one opponent more than twice.

## Initial Seeding

Unrated players have their rating initialized in the system based on the following order of preference:

**Regular Ratings:** 1. Converted FIDE rating, 2. Converted CFC rating, 3. US Chess Quick rating based on at least four games, 4. Age formula, 5. 750

**Quick Ratings:** 1. US Chess regular rating based on at least four games, 2. Converted FIDE rating, 3. Converted CFC rating, 4. Age formula, 5. 750

**Blitz Ratings:** 1. Established US Chess regular rating, 2. Converted FIDE rating, 3. Converted CFC rating, 4. Provisional US Chess regular based on at least four games, 5. US Chess quick rating based on at least four games, 6. Age formula, 7. 750

If a player has no FIDE, CFC, or US Chess rating but has a different foreign national rating, the US Chess office may, at their discretion, determine a converted initial rating.

#### Conversion Formulas

US Chess = (FIDE x 0.94) + 180; if FIDE ≤ 2000  
= (FIDE x 1.02) + 20; if FIDE > 2000

US Chess = CFC – 90; if CFC ≤ 1500  
= (CFC x 1.1) – 240; if CFC > 1500

US Chess = 100 if age < 2 (age = (tournament end date – birth date)/365.25)  
= 50 x age if 2 ≤ age ≤ 26  
= 1300 if age > 26

FIDE ratings greater than 2150 are made based on ten games and FIDE ratings ≤ 2150 or less are made based on five games. CFC ratings > 1500 are made based on five games and CFC ratings ≤ are made based on zero games. Quick ratings, other foreign national ratings, age based ratings, and the default 750 are made based on zero games. US Chess regular ratings are made based on the smaller of 10 and the number of games in which the regular rating is based. Ratings made based on 4-10 games are based on the standard rating formula, not the special rating formula.

#### Rating Floors

US Chess has implemented rating floors (a level in which a player's rating may not fall below), to help prevent discouragement, sandbagging, negative ratings, and as a reward for achieving the OLM title. However, they do distort the rating system which is why the US Chess ratings committee is, in general, not in favor of having them. There are currently four different types of rating floors:

**Minimum floor**-No rating may go below 100. Most players have a slightly higher minimum floor due to the formula  $AF = \min(100 + 4NW + 2ND + NR; 150)$  where NW is the number of wins, ND is the number of draws, and NR is the number of events where the player has played at least three games. The idea behind the formula was to do something about the pileup of scholastic players at the minimum of 100. The formula helps differentiate players who have won and drawn more games as well as competed in more events.

**Money floors**-If a player wins \$4000 or more in a tournament from a U2000 or lower prize, the player gets the floor at the first 100-point level that would make them ineligible to win a prize at that under level again. For example, if a player wins \$4000 in a U1800 section, the player is given an 1800 money floor. If a player wins \$4000 in a U1810 section, they are given a 1900 money floor. If a player wins \$4000 or more from an under prize higher than 2000, they are given a 2000 money floor.

**Peak rating floors**-These floors exist at 1200 and at every one hundred point levels up to 2100. To determine a peak rating floor, subtract 200 points from a player's peak established rating and use first 100 point floor at or below that level. For example, a player who has a peak established rating of 1650 has a peak rating floor of 1400.

**Original Life Master floor**-a player who achieves the Original Life Master title is awarded a 2200 regular rating floor

Rating floors are based on the ratings rounded to the nearest whole number based on conventional rounding rules and not the decimal ratings kept internally. A player who has a history of not being competitive at their floor can request their floor be lowered by 100 points contacting the US Chess office.

## Match Rules

For US Chess purposes, a match is defined as “any event in which all or substantially all of the games are between two individuals who choose to play each other or are chosen to play each other multiple times, such as a multi-game team-on-team match. That definition would exclude any games from events that arise as a result of specific pairing situations during a tournament, such as extra games involving a house player, poor turnout in a section, etc. Since the players didn't enter the event with the intention of playing one person multiple times, the rules regarding participation in a match should not apply. The limitations on ratings changes from match play given below may still apply. Playoffs to decide place prizes in a tournament may be treated as matches.” A match “affects the statistical assumptions upon which the US Chess rating system is based, namely that ratings are based upon a large number of games against a diverse group of opponents. There are also numerous opportunities for manipulation of ratings via matches.” Therefore, matches are rated with the following restrictions:

1. The players must have established published ratings at the start of the match that are no more than 400 points apart from each other based on the rating system the games will be rated under (for dual rated time controls, only the regular ratings count for this rule).
2. A player cannot gain or lose more than 50 points in a match. A player cannot gain or lose more than 100 points in any 180-day period due to match play and cannot gain or lose more than 200 points in any 3-year period due to match play. A player cannot earn bonus points in matches.
3. Any player who is at their rating floor or reaches their rating floor in a match will be considered to have submitted a request to have their floor lowered by 100 points. The US Chess ratings department will review the player's tournament history to see if lowering the floor is appropriate.

A document that explains more of the mathematics of how ratings are calculated can be found at [glicko.net/ratings/rating.system.pdf](http://glicko.net/ratings/rating.system.pdf)

## US Chess Titles

US Chess awards the following titles for over-the-board play:

**Original Life Master (OLM)**-awarded when a player keeps an established regular rating at or above 2200 for 300 games (not necessarily consecutive). Achieving the title gives the player a 2200 rating floor so they are a master for life. (The title was originally called “Life Master” (and you will still often see it abbreviated LM)) but was renamed “Original Life Master” when the norms based title system was implemented to try and avoid confusion with the Life Master norms based title).

**National Master (NM)**-awarded when a player achieves an established regular rating of at least 2200

Norms-based titles: To achieve a norms-based title, a player must have five rated tournament performances ("norms") that would be considered impressive for the particular rating level. For example, to achieve the 1st Category title, a player must have five performances that would be considered impressive for an 1800 player. More specifically, a player must score more than one point above what an 1800 player would be expected to score (mathematically, this means a player must score more than one point to be eligible for a norm). Generally, a player must play at least four games in a tournament to be eligible for a norm. An exception is made when a player plays three games and a fourth game is a full point bye or forfeit win but then a player must score more than two points they would be expected to score at the rating level to earn the norm. Norms cannot be earned in quick-only and blitz events, matches, FIDE event adjustments, and an event where a player has competed against a single opponent more than twice. A player must also have an established rating to achieve a title, and to achieve the Life Senior Master, Life Master, and Candidate Master titles, the player must also have had an established rating corresponding to that level. Norms are awarded separately for each section of an event. If a player has more than one pairing number in a section, (most likely due to withdrawing and re-entering from a multiple schedule tournament) the results are combined when computing norms. The norms-based title system has been applied retroactively to December 9, 1991, the date at which US Chess online records have been retained. Players seeking norms and titles from play before this date can contact the US Chess office. The norms that a player has achieved as well as a norms calculator can be found at

### US Chess norms-based titles

Title	Rating Level
Life Senior Master	2400
Life Master	2200
Candidate Master	2000
1st Category	1800
2nd Category	1600
3rd Category	1400
4th Category	1200

[uschess.org/datapage/norms-list.php](http://uschess.org/datapage/norms-list.php). A document that explains more of the mathematics of how norms are calculated can be found at [glicko.net/ratings/titles.pdf](http://glicko.net/ratings/titles.pdf).

US Chess also has the following rating classes, Senior Master (2400 and up), Master (2200-2399), Expert (2000-2199), Class A (1800-1999), Class B (1600-1799), Class C (1400-1599), Class D (1200-1399), Class E (1000-1199), Class F (800-999), Class G (600-799), Class H (400-599), Class I (200-399), and Class J (100-199). The rating classes aren't considered titles in the same sense as the titles given above are since a player's rating class title is lost if a player's rating drops to a lower class while the titles given above are not lost if a player's rating goes down.

Rating requirements are based on the ratings rounded to the nearest whole number based on conventional rounding rules and not the decimal ratings kept internally. US Chess awards certificates to players achieving the Original Life Master, National Master, Life Senior Master, and Life Master titles. US Chess titles and classes are also completely separate from the OTB titles awarded by FIDE, Grandmaster (GM), International Master (IM), FIDE Master (FM), Candidate Master (CM), Woman Grandmaster (WGM), Woman International Master (WIM), Woman Fide Master (WFM), and Woman Candidate Master (WCM).