

USATT Ratings System Explained

August 7, 2025

Overview

This document serves to provide a detailed explanation for how players' ratings are calculated following the conclusion of every USATT-sanctioned tournament. USATT ratings are based on the Elo system, https://en.wikipedia.org/wiki/Elo_rating_system, which is used to assign numeric values as a means for comparing the relative skill levels of the participants. The higher the number, the higher the skill level. NOTE: these same rules are applied to the calculation of USATT League ratings.

Rating Points Exchange Chart

Each match will be evaluated to determine the number of points gained by the winner and points lost by the loser. The following chart will be used for all such evaluations:

Rating Differential	Higher Rated Wins	Lower Rated Wins
0 - 12	8	8
13 - 37	7	10
38 - 62	6	13
63 - 87	5	16
88 - 112	4	20
113 - 137	3	25
138 - 162	2	30
163 - 187	2	35
188 - 212	1	40
213 - 237	1	45
238+	0	50

Pass 1

The first pass is used to identify players who appear to be underrated and thus deserving of a rating adjustment. Upward adjustment of the ratings of underrated players has the benefit of limiting the points lost by the players they defeated. To identify these underrated players, we will only look at the matches between players who have pre-existing ratings.

Standard Adjustment

After processing all of the matches between players with pre-existing ratings, the Adjusted Rating will be set to the sum of the player's pre-existing rating and the net points gained from these matches if either of the following two criteria are met: 1) Gain 60+ points, or 2) Gain 40+ points with at least two 20+ point wins.

Special Adjustment

In some extraordinary cases, a player may be so underrated that it makes more sense to ignore the pre-existing rating and determine the appropriate Adjusted Rating using an average based solely on specific qualifying match results in this tournament. These cases are identified when any of the following three criteria are met: 1) Gain 150+ points, 2) Have three or more 50-point wins, 3) Have two 50-point wins where the total rating differential with the two opponents is 700+ points. An example of this third criterion would be a 1200 rated player has wins over a 1500 rated player and a 1600 rated player ($1500 - 1200 + 1600 - 1200 = 700$).

The calculation of the Adjusted Rating uses the following formula (assuming the player had at least one match loss):

If the player's worst loss is higher than their best win, use the average of the best two wins as the adjusted rating. When there is at least one loss with a rating lower than the best win rating, we start by ranking the loss ratings in ascending order and the win ratings in descending order. Compare the first pair of ratings and then the second pair and so on until the loss rating is higher than the win rating. Then, starting with the first pair of ratings, we begin calculating the cumulative mean. As we continue through each subsequent pair of ratings, if we find that both ratings are above the Cumulative Mean at this point, we stop and disregard the loss rating as we don't want a loss to further boost the Adjusted Rating (see Example 2). Likewise, if we reach a pair of ratings that are both below the Cumulative Mean at this point, we stop and disregard the win rating as we don't want a win to further lower the Adjusted Rating (see Example 3).

Example	Wins	Losses	Cumulative Mean	Explanation
1	1800	1400	1600	
	1620	1460	1570	
	1500	1525		The rating of this loss is higher than the rating of the win so we exclude these from the calculation.

$(1800 + 1400 + 1620 + 1460) / 4$ results in an Adjusted Rating of **1570**.

Example	Wins	Losses	Cumulative Mean	Explanation
2	1800	1400	1600	
	1750	1630	1645	
	1730	1722		Both ratings are higher than the Cumulative Mean so we exclude this loss rating from the calculation.

$(1800 + 1400 + 1750 + 1630 + 1730) / 5$ results in an Adjusted Rating of **1662**.

Example	Wins	Losses	Cumulative Mean	Explanation
3	1800	1400	1600	
	1610	1410	1555	
	1438	1420		Both ratings are lower than the Cumulative Mean so we exclude this win rating from the calculation.

$(1800 + 1400 + 1610 + 1410 + 1420) / 5$ results in an Adjusted Rating of **1528**.

In the event that the player earning the Special Adjustment had no match losses, simply use the average of the player's two best wins.

Pass 2

The second pass is used to derive initial ratings for all of the unrated players. For this we will look only at matches between unrated players and rated players. For unrated players who lost every one of these matches, the Initial Rating will be set to the Estimated Rating included with the tournament results (provided that it is equal to or lower than the player's lowest rated opponent). If the Estimated Rating is missing or too high, an error will occur and ratings processing will halt.

For unrated players who won every one of these matches, the Initial Rating will be set to the Estimated Rating included with the tournament results (provided that it is equal to or higher than the player's highest rated opponent). If the Estimated Rating is missing or too low, an error will occur and ratings processing will halt.

For unrated players with both wins and losses, if the Worst Loss is greater than or equal to the Best Win, we set the Initial Rating to the Best Win rating. Otherwise, we use the same best wins / worst losses formula for the Special Adjustment.

Estimated Ratings are mandatory for unrated players who either win all or lose all of their matches against rated players and are ignored in all other instances. Regardless of the scenario, all Initial Ratings must be set to at least 200.

Final Pass

Now that all unrated players have been assigned an Initial Rating and adjusted ratings have been granted to those rated players who met the criteria, process all of the tournament matches accumulating points gained/lost based on the Rating Points Exchange Chart. As an additional safeguard against ratings approaching 0, players with ratings below 100 at this stage can only lose a maximum of 3 points in any one match.