

## **ACDA Heating & Scoring Format**

### **Heating & Scoring**

For all ACDA contests, the ACDA “Majority Rules” Scoring Format must be used. All contest practices and procedures, to include heating, balloting, scrutineering, scoring, auditing, and reporting of this format will be supervised by an ACDA -“approved” Contest Coordinator, with an ACDA -“verified” Scoring Director(s) and/or ACDA -“verified” Scrutineer(s), using a vetted and verified ACDA -“authorized” Scoring System, according to the following rules:

#### **Rule # 1 : Heating Rules: (from Ben)**

1. If time and circumstance allow, a heat will be comprised of only those contestants that are in the same division.
2. If a division requires more than one heat, then the difference in the size of heats shall be no more than one. When multiple heats are required for a particular division, the division should not be ‘co-mingled’ with other divisions, unless absolutely necessary.
3. When a division requires multiple heats, those heats must be run in a ‘contiguous’ order, one right after another.
4. Whenever possible, multiple heats for a particular division that have different sizes, the lesser size shall precede the greater size as this helps facilitate scratches giving contest officials the ability to move up contestants to continually re-balance the heats for fairness.
5. However, if time and circumstance so require, heats may be co-mingled with multiple divisions in a heat. Pro-Am Pre-Newcomer can be with Newcomer divisions. Couples age divisions can be combined Newcomer with Novice & Intermediate with Advanced. Couples Open Div 4 with Div 3, & Div 2 with Div 1.
6. If divisions are ‘co-mingled’ for efficiency, and one or more of the divisions are heated in multiple heats, then again, the difference in the total size of heats containing a particular division shall be no more than 1 (to include the co-mingled contestants), and for each particular division the heats must still be run in a ‘contiguous’ order.

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<b>Pro-Am and Couple's Order</b>	<b>Line Dance Order</b>	<b>All SUP &amp; RSUP</b>
Triple Two	Rise & Fall	
Night Club	Pre NC A, Pulse	
V. Waltz		
Waltz	Smooth	RSUS, SUPS Waltz RSUC, SUPC Flight 1 LXU, LXR Dance A
SONG BREAK		
Polka	Pre NC B, Cuban	
Cha-Cha		
East Coast Swing	Street	
SONG BREAK		
Two Step		RSUS, SUPS Two Step RSUC, SUPC Flight 2 LXU, LXR Dance B
West Coast Swing	Stage	RSUC, SUPC Show Dance RSUS, SUPS Solo LXU, LXR Solo Medley

<b>Dance Order</b>	
SUP, RSU Classic	1 - Slow Flight: V. Waltz, Waltz, Night Club, Triple Two, West Coast Swing 2 - Fast Flight: Two Step, Cha-Cha, Polka, East Coast Swing 3 - Show Dance
SUP, RSU Showcase	1 - Waltz 2 - Two Step 3 - Solo Showcase choose music. Must be in separate heats.
Line Dance LXU, LXR	1 – Dance A 2 – Dance B 3 – Solo Medley

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## **Rule #1 – Determining the results from the majority mark:**

1. In the Finals Round on the ballot, each judge must circle a “Medals” mark for each contestant, with marks given in ascending order: “HM” (or “M” on some ballots), “B”, “S”, “S+”, “G”, “G+”, “GH”, “GH+” (or “H” on some ballots), or “GG”. For Pro-am Dance, after circling a mark, it is not necessary to rank the marks as ties are acceptable. For Couples Dance or Line Dance, if a circled mark is the same for more than one contestant, then the mark must then be ranked, with the lowest number (“1”, or 1st) being the higher rank.
2. “Medals” marks are converted to placements as follows: A higher “Medals” mark always defeats a lower “Medals” mark (for example, “G” always defeats “S”). If the same “Medals” mark is used more than once on a ballot, the marks are ranked by the judge from first (“1”) to last. A “Medals” mark with a lower number value always defeats the same “Medals” mark with a higher number value (for example, “G+” defeats “G”). Judges must not tie contestants in Couples Dance or Line Dance contests.
3. “Medals” marks for Couples Dance and Line Dance are converted to designated number values as follows: “GG” = 1; “GH+” = 2; “GH” = 3, “G+” = 4, “G” = 5, “S+” = 6, “S” = 7, “B” = 8, “HM” = 9. However, “Medals” marks for Pro-am have “+” (plus) values for marks within the skill level (as determined by Judges’ Methodology), that is, “GH” (Gold with Honors), “G” (Gold), and “S” (Silver). Therefore, for Pro-am Dance, “Medals” marks are converted thusly: “GG” = 1; “GH+” = 2; “GH” = 3; “G+” = 4; “G” = 5; “S+” = 6; “S” = 7; “B” = 8; and “HM” = 9. For Pro-am Dance, judges may tie contestants with their “Medals” marks, meaning they can give the same mark multiple times.
4. The majority mark of the judges, here in Rule #3, is the first determination of results for a “single dance”. To achieve the majority mark, we use the following two steps. Step #1 is to have the marks arranged in a pre-determined judge order that will remain the same in the chart of the results for the entire divisional contest and will be known as the “raw” scores. The “raw” scores indicate each judge’s marks consistently from one contestant to the next, one dance to the next, and included in this order must be each judge’s name as revealed. Step #2 then re-arranges each contestant’s marks, so they become “re-ordered” scores by sorting them in ascending order from the best score to the worst score (raw scores: [3,1,2,5,4] will become re-ordered scores: [1,2,3,4,5]). The majority mark is always the middle mark (where a contestant gains their “majority”) when using an odd number of judges. In the examples above that had 5 judges, the majority mark is “3”. In the case of 7 judges the 4th mark is the majority mark, and for 9 judges the 5th mark is the majority mark, and for 11 judges the 6th mark is the majority mark. If an even number of judges is used for contingency or emergency purposes, then the majority mark is always one mark more than half the marks. For 6 judges, half the number of judges is 3 (which is not a “majority”), but the 4th mark would then represent the majority mark. In the case of 8 judges the 5th mark is the majority mark, and for 10 judges the 6th mark is the majority mark.
5. All majority marks where each contestant gains their “majority” are then sorted in ascending order, from the smallest number value (best “mark”) to the largest number value (worst “mark”), from first, “1”, to last. The smallest number value (or highest score) is the best majority mark and receives 1st place. The next larger number value (or lesser score) will be awarded 2nd place, and on and on, until all contestants in a dance are assigned a unique placement. If a tie persists after Rule #1 is fully executed, then proceed to Rule #2.

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### **Rule #2 – 1st Tiebreaker, determining the majority size (to the ‘right’ of the majority mark):**

1. In the case of a tie at Rule #1, the majority size for each contestant is determined by counting the number of marks to the ‘right’ of the majority mark that have a larger number value (or lesser score), for example, [1,2,3,4,5] has 2 marks that are of a higher number value than the majority mark; [2,2,3,3,4] has 1 mark that has a higher number value than the majority mark; and [3,3,3,3,3] has 0 marks that have a higher number value than the majority mark. Note that all three sample groups have the same majority mark of “3” (as determined by Rule #1).
2. The majority size for all the tied contestants is sorted in ascending order, from the smallest number value (which is the best “size”) to the largest number value (which is the worst “size”). The smaller number value represents a greater majority size, that is, less marks that are at a higher number value than the majority mark. The contestant with the smaller majority size number value is awarded the higher placement. The contestant with the next larger number value will be awarded the next higher placement, and on and on, until all tied contestants are assigned a unique placement. If a tie persists after Rule #2 is fully executed, then proceed to Rule #3.

### **Rule #3 – 2nd Tiebreaker, determining the majority sum (to the ‘left’ of the majority mark):**

1. In case of a tie at Rule #2, the majority sum for each contestant is determined by totaling the marks that are to the ‘left’ of the majority mark, for example, [1,2,3,4,5] has a totaled value of 3; [2,2,3,4,5] has a totaled value of 4; [2,3,3,4,5] has a totaled value of 5; and [3,3,3,4,5] has a totaled value of 6. Note that all four sample groups have the same majority mark of “1” (as determined by Rule #1) and the same majority size of “2” (as determined by Rule #2).
2. The majority sum for all the tied contestants is sorted in ascending order, from the smallest number value (best “sum”) to the largest number value (worst “sum”). The smaller number value represents the better majority sum, given that the majority mark is the 3 same and the majority size is the same. The contestant with the smaller majority sum number value is awarded the higher placement. The contestant with the next larger number value will be awarded the next higher placement, and on and on, until all tied contestants are assigned a unique placement. If a tie persists after Rule #3 is fully executed, then proceed to Rule #4.

### **Rule #4 – 3rd Tiebreaker, determining look-ahead columns (to the ‘right’ of the majority mark):**

1. In case of a tie at Rule #3, each contestant’s re-ordered marks that are to the ‘right’ of the majority mark create a look-ahead number ‘group’ to be compared, column by column, for example, [1,2,3,4,4] has a look-ahead group of [4,4]; [1,2,3,4,5] has a look-ahead group of [4,5]; [1,2,3,5,5] has a look-ahead group of [5,5]. All three groups have the same majority mark of “3” (as determined by Rule #1); the same majority size, “2” (as determined by Rule #4); and the same majority sum, “3” (as determined by Rule #3).

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2. When looking at each column of the look-ahead ‘group’ (with each successive mark so indicated as separated by a comma) from left to right, the first mark of each tied contestant creates a column of number values to be compared. The next mark in the look- ahead sequence creates a second column, with the next mark (if there is one) a third column, and on and on, until all marks (to the ‘right’ of the majority mark) for all tied contestants are each placed in a column of values. Each column is considered one at a time from left to right and sorted in ascending order from the smallest number value (which is the best “mark”) to the largest number value (worst “mark”). When the first column of the look-ahead is compared, if the tied contestants have the same mark, the next column is then compared. If the marks are still the same, the next column (if there is one) is compared, until each column of values to the “right” of the majority mark has been compared after finding the previous column’s marks to be the same. When looking at any single column of values and comparing marks in sequence, the contestant with the smaller look-ahead value is awarded the higher placement. The contestant with the next larger number value is awarded the next higher placement, and on and on, until all tied contestants are assigned a unique placement. If a tie persists after Rule #6 is fully executed, then proceed to Rule #5.

### **Rule #5 – 4th Tiebreaker, determining look-behind columns (to the ‘left’ of the majority mark):**

1. In case of a tie at Rule #4, each contestant’s re-ordered marks that are to the ‘left’ of the majority mark, create a look-behind number ‘group’ to be compared, column by column, for example, [1,3,3,4,5] has a look-behind group of [1,3]; [2,2,3,4,5] has a look-behind group of [2,2]. Both groups have the same majority mark of “3” (as determined by Rule #1), the same majority size, “2” (as determined by Rule #2); the same majority sum, “4” (as determined by Rule #3); and the same look-ahead of “4,5” (as determined by Rule #4).

2. When looking at each column of the look-behind group (with each successive mark so indicated as separated by a comma) from left to right, the first mark of each tied contestant creates a column of values to be compared. The next mark in the look-behind sequence creates a second column, with the next mark (if there is one) a third column, and on and on, until all marks (to the ‘left’ of the majority mark) for all tied contestants are each placed in a column of values. Each column is considered one at a time left to right and sorted in ascending order from the smallest number value (best “mark”) to the largest number value (worst “mark”). When the first column of the look-behind is compared, if the tied contestants have the same mark, the next column is then compared. If the marks are still the same, the next column (if there is one) is compared, until each column of values to the ‘left’ of the majority mark has been compared after finding the previous column’s marks to be the same. When looking at any single column of values and comparing marks, the contestant with the smaller look-behind number value is awarded the higher placement. The contestant with the next larger number is awarded the next higher placement, and on and on, until all tied contestants are assigned a unique placement. If a tie persists after Rule #5 is fully executed, then proceed to Rule #6.

### **Rule #6 – 5th Tiebreaker, determining “Head-to-Head” results (that is, wins/losses/ties records) from individual judges’ marks (with re-visititation); and if a final tie, determining a carry-forward value:**

1. The final proof of a tie at Rule #5 is when the re-ordered marks for a “single dance” initially (determined in Rule #1) yields a result where the tied contestants have the same identical judges’ marks. If this is not true, a scoring error has occurred, and the previous rules must be re-calculated. If the marks are indeed identical, a tie still exists.

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2. In case of a tie at Rule #5, only the tied contestants are now compared for wins/loses/ties between each contestant's marks on each judge's ballot. Within the group of tied contestants, a judge's mark for a specific contestant when compared with the mark for another tied contestant will either yield a win, or a loss, or a tie between the two contestants for that specific judge. That in turn will yield a record of wins/losses/ties across all tied contestants, each contestant against each other contestant in each judge's marks. Please note, in wins/losses/ties the "numeric" difference in the marks is not considered, but only whether it was a win, or a loss, or a tie. Like in other sports, the number of wins, losses, and ties against the competition reads like a record for the contestant in question, that is, 4 wins, 3 losses, and 0 ties reads as a record of 4-3-0, which then is higher than the record of 3-4-0, where more wins are attained by the first contestant. A record of 11-7-4 is higher than the record of 11-8-3, where fewer losses and more ties are attained by the first contestant. In all cases the total number of wins, losses, and ties for each contestant in the tied contestant group should be the same. If this is not true, a scoring error has occurred, and the wins/loses/ties should be re-calculated. While these above examples of contestant records are easy to comprehend, when the number of contests or "games played" is great and diverse, and ties are involved (with most likely 3 or more contestants tied, as sometimes happens in Pro-am dance), then the placements can be visually difficult to determine. So, A numeric recording of wins/losses/ties will be done by computing either the "win" percentage, or the "loss" percentage, depending on whether the reporting is to show the "highest" or the "lowest" value as the best score in the reporting format. Reporting is shown as a 3-place decimal value [".xxx"], either as a "win" percentage or a "loss" percentage that when, for audit purposes, they are added together equals a total of "1.000". Where considering the highest "win" value, a ".667" is better than a ".600", and where considering the lowest "loss" value, a ".333" is better than a ".400". When computing either "wins", "losses", and "ties" into a numeric value, note that "ties" are a numeric 'push' between contestants and are therefore computed as "half of a win" and "half of a loss" where the total number of "games played" remains the same. When a 'partial' percentage occurs, the 3-place decimal value is either rounded up or down as the case may be, with a 'half' of a percentage point [".xxx5"] being rounded up for a "win" percentage and rounded down for a "loss" percentage.

For the ACDA "Majority Rules" Scoring Format, when the wins/losses/ties records of the tied contestants are compared, a new number based on "loss" percentage is computed from the total number of contests considered or "games played". [The reason we use "loss" percentage rather than "win" percentage is because like all other scoring "rules" in the ACDA "Majority Rules" Scoring Format the lowest value number is considered the "best" score! All these lower numbers will one day yield a single number called the Vastel Value which will be used to show 1 value displayed electronically to determine the order of an event contest's results]. To compute the true value of a contestant's "loss" percentage, the total number of "losses" must be divided by the total number of "games played". If there are ties to be considered in the wins/losses/tie's records, for the purpose of arriving at the true "loss" percentage value, each "tie" must be halved, yielding the value of  $\frac{1}{2}$  of a "win" and  $\frac{1}{2}$  of a "loss". In the example above, a record of 11-7-4 is computed as though the contestant had 13 wins and 9 losses, thus yielding a true "loss" percentage of ".409", while the record of 11-8-3 is computed as 12.5 wins and 9.5 losses, or a true "loss" percentage of ".432". The loss percentage of .409 is lower than the loss percentage of .432, thus a better loss percentage. The contestant with the smaller loss percentage number value is awarded the higher placement, if a tie for the best record does not persist. This is the only placement within the Dance awarded at this time. After awarding the best record, or if a tie persists, then proceed to Rule #6, part #3.

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3. If the initial tie in question from Rule #5 was only between two contestants, then the second contestant with the lesser record will be awarded the next lower Dance placement. If the initial tie in question exists for more than two contestants for the same Dance placement and the tie for the highest Dance placement is broken at Rule #6, part #2, the remaining contestants will still be considered tied, but for the next lower Dance placement. At this time, a ‘new’ computation must be done for the remaining tied contestants, executing Rule #6, part #2 once again, thus negating the ‘group’ effect of the contestant that received the previous higher Dance placement (as now it is essentially considered a ‘new’ head-to-head competition between the remaining tied contestants). This ‘new’ computation for the remaining tied contestants is a ‘re-visitation’ of Rule #6, where part #2 is re-applied and re-calculated, and where the ‘re-visitation’ will yield new wins/losses/ties records to be compared. This ‘re-visitation’ process must be computed using Rule #6, part #2, with each successive awarding of a next lower Dance placement from the original ‘group’ of tied contestants, where there are still tied contestants that remain to be considered. Basically, if the original ‘group’ of tied contestant’s numbers 3, there will be 1 ‘re-visitation’ process used, and if the original tied ‘group’ numbers 4, there will be 2 ‘re-visitation’ processes used, and if the original tied ‘group’ numbers 5, there will be 3 ‘re-visitation’ processes used, and on and on, until all tied contestants from the original tied ‘group’ are assigned, each in turn, the next lower Dance placement. If a tie persists for any ‘group’ of contestants that have the same exact wins/loses/ties record after Rule #6 is executed, then the tie between those contestants is considered ‘final’, therefore proceed Rule #6, part #4.

4. The contestants with a final tie share the Dance placements for which they are tied (for example, a 2-way tie for 2nd place shares the placements of 2nd and 3rd, and a 3-way tie for 5th place share the placements of 5th, 6th, and 7th). However, despite the shared placements in the final tie, the contestants are officially announced as being awarded the higher Dance placement only, with the other shared Dance placements not announced or awarded (for example, if 2 contestants are tied for 3rd, thus sharing 3rd and 4<sup>th</sup> placements, they are both announced and awarded “3rd place”, with the “4th place” not announced or awarded). The next placement announced and awarded would then be 5th place. This is similarly done for all tied placements in a final tie.

5. Each “single-dance” placement that applies to a division’s defined Championship formula, equates to a carry-forward value used in Rule #7 (the first rule for determining results in a “multi-dance” contest). For example, a 1st place award receives a value of “1”, a 2nd place a value of “2”, a 3rd place a value of “3”, and on and on, until all placements are assigned a carry-forward value.

6. If there is a final tie, calculate the carry-forward value for the tied contestants as follows: Total the shared placements of the tied contestants, and divide that total by the number of tied contestants, for example, if 2 contestants are tied for 3rd and 4th, the placements add up to “7”, which is then divided by 2 (the number of tied contestants) to get a value of “3.5” to carry-forward as each of their placements for that dance in the division’s Championship formula. If 3 contestants are tied for 3rd, 4th, and 5th, the sum of the placements is “12”, divided by 3, which equals a carry-forward value of “4” for each tied contestant. If 4 contestants are tied for 3rd, 4th, 5th, and 6th, the sum of the placements is “18”, divided by 4, which equals a carry-forward value of “4.5” for each tied contestant. In this way, tied contestants in a “single-dance” format are computed a carry-forward value that is the “average” of all placements under consideration for the tied contestants. The tied contestants, while being announced with the top placement under consideration, will only be awarded this “average” of placements in the “Multi-Dance” Championship formula.