## The Lewis Class System

The Lewis Class system can be used for calculating winners of an event (for awards), or winners of the Lewis Purse (money). The normal Rules for Lewis system are as follows:

1. When all shooting is completed, list all scores in descending score order.
2. They are then divided into as many groups as are dictated. Methods are:

- A preset number of groups - regardless of entry amount.
- A computed group amount, for example: 1 group for every 10 entries.

3. Since there will often be an odd number of entries and tie scores on the original dividing lines between the groups, the following rules have been established:

- Where a short group is necessary due to an odd entry list, the short group (or groups) will always be the upper group(s).
- When an original line is drawn between a number of tied scores, the contestants are re-assigned to the group in which the Majority of scores appear.
- Where an EQUAL number of ties scores appear on either side of the original line, contestants are assigned to the head of the lower group.
- If contestants are re-assigned to other groups due to tied scores between original lines, ONLY those groups are affected. The original lines in other groups remain. All money in groups will stay intact, regardless of any reassignment to another group.

On the next page we will see how these rules can be applied to an example shoot. The algorithms are listed so that you can create Macros in spreadsheets, or program lines of code into software you have developed.

## Variables needed:

For our example, the following Data is provided:

Total Entries $=32$
Number of Groups = 5
Lewis Class Price $=\$ 10.00$

## Determining Original Lines \& Amounts:

In Order to draw your original lines, you will need to compute other variables which will aid in determining original group sizes and monies.

1) Compute Total Money $\begin{array}{rlcc} & = & \text { Total Entries } & \mathrm{x} \\ \$ 320 & = & 32 & \mathrm{~L}\end{array}$
$\$ 320 \quad 32 \quad x \quad 10$
2) Compute Group Money $=$ Total Money / Number of Groups
$\$ 64=\$ 320 /$
3) Compute Base Numbers $=$ Total Entries / Number of Groups
$6.4=32 / 5$

Which Creates: Whole Base Number $=6$
Remainder Base Number $=0.4$

Now Compute: Add Rest $=($ Remainder Base Number * 10) $/ 2$
$2=(.04 * 10) / 2$
4) At this point, we need to initialize the Basic size of each group, which in our example, is 6 and is contained in Whole Base Number. Any group which should be larger because of the odd number of entries will be increased using the Remainder Base Number.

Move Whole Base Number of 6 to All Group Entry Counters (1 thru 5)

Now increase the entries of the Lower groups according to the rules by using the Add Rest Variable:

- If Add Rest $=0$, then do not add to any Group Entries, Split is perfect.
- If Add Rest $=1$, then Add 1 to Group 5 entry counter
- If Add Rest $=2$, then Add 1 to Group 4 thru Group 5 entry counter
- If Add Rest $=3$, then Add 1 to Group 3 thru Group 5 entry counter
- If Add Rest $=4$, then Add 1 to Group 2 thru Group 5 entry counter NOTE: The Add Rest variable will never be more than (Number of Groups - 1)

5) In our example, Add Rest was equal to 2 , so the groups are now originally drawn with the following amount of Entries

|  | Name | Score |  |
| :---: | :---: | :---: | :---: |
|  | Jim | 100 |  |
|  | Jan | 99 |  |
| Group 1 | John | 99 |  |
|  | Terry | 98 |  |
|  | Eric | 96 |  |
|  | Susie | 96 | (6 entries) |
|  | Dolly | 95 |  |
|  | Mike | 95 |  |
| Group 2 | Sam | 94 |  |
|  | Dana | 94 |  |
|  | Joshua | 93 |  |
|  | Janie | 93 | (6 entries) |
|  | Debbie | 93 |  |
|  | Lucy | 92 |  |
| Group 3 | Patty | 92 |  |
|  | Zelda | 91 |  |
|  | George | 91 |  |
|  | Paul | 90 | (6 entries) |
|  | Rita | 90 |  |
|  | Ofelia | 90 |  |
|  | Pamela | 90 |  |
| Group 4 | Greg | 89 |  |
|  | Art | 89 |  |
|  | Olga | 88 |  |
|  | Joseph | 85 | (7 entries) |
|  | Mary | 85 |  |
|  | Will | 84 |  |
|  | Lee | 80 |  |
| Group 5 | Renee | 79 |  |
|  | Jonathon | 75 |  |
|  | Lisa | 74 |  |
|  | Bart | 70 | (7 entries( |

## Adjusting Groups

Now that you have drawn your original lines, you must look at the scores on either side of the lines to determine whether or not contestants will remain in that group, or move to another group. The following table shows the results of applying the last few Lewis class rules. Note that the Original lines are still shown, but contestants have been shifted.

|  | Name | Score |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Jim | 100 | Winner Group 1 - \$64.00 |  |
|  | Jan | 99 |  |  |
| Group 1 | John | 99 |  |  |
|  | Terry | 98 |  |  |
|  | Eric | 96 |  |  |
|  | Susie | 96 |  |  |
|  | Dolly | 95 | Co-Winner Group 2 - \$32.00 |  |
|  | Mike | 95 | Co-Winner Group 2 - \$32.00 |  |
|  | Sam | 94 |  |  |
| Group 2 | Dana | 94 |  |  |
|  | Joshua | 93 |  |  |
|  | Janie | 93 |  |  |
|  | Debbie | 93 | $\leftarrow$ Note that Debbie headed to Group 3, but because of Joshua \& Janie's 93's, Debbie moved to where the Majority was. |  |
|  | Lucy | 92 | Co-Winner Group 3-\$32.00 | $\leftarrow$ After Debbie moved to Group 2 |
| Group 3 | Patty | 92 | Co-Winner Group 3-\$32.00 | Lucy and Patty now head Group Group 3 with 92's |
|  | Zelda | 91 |  |  |
|  | George | 91 |  |  |
|  | Paul | 90 | Co-Winner Group 4 - $\$ 16.00$ <br> Co-Winner Group 4 - \$16.00 | $\leftarrow$ Paul moves from the bottom of Group 3 to the head of Group 4 to Join the majority of 90 's |
|  | Rita | 90 |  |  |
|  | Ofelia | 90 | Co-Winner Group 4 - $\$ 16.00$ |  |
| Group 4 | Pamela | 90 | Co-Winner Group 4 - \$16.00 |  |
|  | Greg | 89 |  |  |
|  | Art | 89 |  |  |
|  | Olga | 88 |  |  |
|  | Joseph | 85 | Co-Winner Group 5-\$32.00 Co-Winner Group 5 - \$32.00 | ¢Joseph now heads Group 5. The |
|  | Mary | 85 |  | Rules state that if there is the same number of alike scores, then Joseph moves down to head the next group. |
|  | Will | 84 |  |  |
|  | Lee | 80 |  |  |
| Group 5 | Renee | 79 |  |  |
|  | Jonathon | 75 |  |  |
|  | Lisa | 74 |  |  |
|  | Bart | 70 |  |  |

## Figure 1 - Class Purse

High Gun - 3 places per Class - Split 50/30/20
Class A - 23 entries (@ \$10 ea) - \$230.00

| Situation 1: | Score | Payout | \% Split |
| :--- | :---: | ---: | :--- |
| John Dansforth | 96 | $\$ 115.00$ | $(50 \%)$ |
| Eric Johnson | 95 | $\$ 69.00$ | $(30 \%)$ |
| Jim Quentin | 94 | $\$ 23.00$ | $(10 \%)$ The Last Place (20\%) is split |
| Kim Neeman | 94 | $\$ 23.00$ | $(10 \%)$ evenly amongst the 94 's. |

Situation 2: Score Payout \% Split

| John Dansforth | 100 | $\$ 57.50$ | $(25 \%)$ All three places to be paid |
| :--- | :--- | :--- | :--- |
| Eric Johnson | 100 | $\$ 57.50$ | $(25 \%)$ |
| $(\mathbf{5 0 \% + 3 0 \% + 2 0 \% )}$ are |  |  |  |
| Jim Quentin | 100 | $\$ 57.50$ | $(25 \%)$ consumed and evenly split |
| Kim Neeman | 100 | $\$ 57.50$ | $(25 \%)$ amongst the $\mathbf{1 0 0}$ 's |

The following example IS NOT figured using the High Gun System
Situation 3: Score Payout \% Split

| John Dansforth | 100 | $\$ 115.00$ | $(50 \%)$ All 99's evenly split the $\mathbf{3 0 \%}$ |
| :--- | :---: | :---: | :--- |
| Eric Johnson | 99 | $\$ 17.25$ | $(7.5 \%)$ portion of the money. |
| Jim Quentin | 99 | $\$ 17.25$ | $(7.5 \%)$ |
| Kim Neeman | 99 | $\$ 17.25$ | $(7.5 \%)$ This lone 98 took the entire |
| John McMahon | 99 | $\$ 17.25$ | (7.5\%) 20\% place, thereby actually |
| Betty Hines | 98 | $\$ 46.00$ | (25\%) winning more than the 99 's |

Figure 2 - Oklahoma Options (50's)
High Gun - 2 places per class - Split 60/40
Class B-7 entries (@ $\mathbf{\$ 1 5} \mathrm{ea}$ ) = \$105.00 (\$35 per group of 50)

|  |  | $1^{\text {st }} 50$ |  |  | $2^{\text {nd }} 50$ |  |  | $3^{\text {rd }} 50$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Score | payout | \%split | Score | payout | \%split | Score | payout | \%split |
| Allen John | 96 | 46 |  |  | 49 | \$4.67 | 13\% | 50 | \$21.00 | 60\% |
| Bechham, Jim | 98 | 50 | \$11.67 | 33\% | 49 | \$4.67 | 13\% | 48 |  |  |
| Carter, Beth | 99 | 50 | \$11.67 | 33\% | 50 | \$21.00 | 60\% | 49 | \$14.00 | 40\% |
| Davidson, Marc | 94 | 48 |  |  | 47 |  |  | 46 |  |  |
| Ericson, Henry | 98 | 50 | \$11.67 | 33\% | 49 | \$4.67 | 13\% | 48 |  |  |
| Foust, Jane | 90 | 41 |  |  | 46 |  |  | 42 |  |  |
| Hines, Betty | 94 | 45 |  |  | 45 |  |  | 48 |  |  |
|  |  |  | \$35.00 |  |  | \$35.00 |  |  | \$35.00 |  |

Note that entrants of this purse are not always listed by high Score. Entrants may do well in the $1^{\text {st }}$ group of 50 targets, but Not as well in the following groups of 50 .

Figure 3 - Lewis Class Purse
High Gun - 3 places per class - Split 50/30/20
22 Entries (@ \$10 ea) - \$220.00-3 classes - \$73.34/class

|  | Eric Johnson | 100 | $\$ 36.67$ | $(50 \%)$ |
| :--- | :--- | :---: | :---: | :--- |
|  | John Dansforth | 99 | $\$ 9.17$ | $(12.5 \%)$ |
|  | Kim Neeman | 99 | $\$ 9.17$ | $(12.5 \%)$ |
| Class 1 | Dave Johnson | 99 | $\$ 9.17$ | $(12.5 \%)$ |
|  | John McMahon | 99 | $\$ 9.17$ | $(12.5 \%)$ |
|  | Jim Quentin | 98 |  |  |
|  | Betty Hines | $\underline{98}$ |  |  |
|  | Beth Carter | 98 |  |  |
|  |  |  |  |  |
|  | John Allen | 97 | $\$ 24.45$ | $(33 \%)$ |
|  | Jane Foust | 97 | $\$ 24.95$ | $(33 \%)$ |
| Class 2 | Mark Davidson | 97 | $\$ 24.45$ | $(33 \%)$ |
|  | Jim Beckham | 96 |  |  |
|  |  |  |  |  |
|  | Judy McMahon | 95 | $\$ 18.34$ | $(25 \%)$ |
|  | Dana Nemeth | 95 | $\$ 18.34$ | $(25 \%)$ |
|  | Sam Mauer | 95 | $\$ 18.34$ | $(25 \%)$ |
|  | Clast McGregor | 95 | $\$ 18.34$ | $(25 \%)$ |
|  | Carl Hines | 91 |  |  |
|  | Diana Rosen | 91 |  |  |
|  | Mike Kenny | 91 |  |  |
|  | Dave Bemer | 90 |  |  |
|  | Mark Riley | 82 |  |  |
|  | Debbie Radley | 78 |  |  |
|  |  |  |  |  |

## The Lewis Class Purse

The purse is very common, yet misunderstood by many. This purse does not use the NSSA or NSCA classification and has winners in multiple classes. Before the shoot begins, shoot management should determine how many classes there will be and how many places in each class. If this is too difficult to determine, an example program might read "there will be one class for every 10 entries". When all shoting is complete, rank the scores in descending order from highest to lowest. Then divide them into as many groups as there are classes.

For example, if there were 30 entries and 3 classes, there would be 10 scores in each class. Lines should now be drawn to show these classes. Because there will almost always be odd numbers of entries and tied scores, the following rules have been established:

Rule 1 - When a short class is necessary because of an odd entry list, the short class shall head the list. The figure 3 example shows that 22 entries and three classes create class 1 with seven scores, class 2 with seven scores, and class 3 with eight scores.

Rule 2 - If the original class division line falls between a number of tied scores, the participants are assigned to the class in which the majority of scores appear. Notice that in the example, Beth Carter's score of 98 moved her from the top of class 2 to the bottom of class 1 because there were two 98s (Jim \& Betty) on the other side of the original class line.

Rule 3 - If an equal number of tied scores appear on either side of the line, participants are assigned to the top of the lower class. In the Figure 3 example notice that Judy and Dana's 95 moved from the bottom of class 2 to the top of class 3 because of this rule.

Rule 4 - When the original lines have changed because of tied scores, the change shall apply only to that class. The original lines will remain intact for all other classes unless they are adjusted because of Rule 2 or Rule 3. After all rules have been applied, the places are awarded according to the program and monies are distributed.

If you have any questions regarding any purses, or if you just want more information, please don't hesitate to call us here at headquarters at 210-688-3371! We'll do our best to answer any questions you may have. Until then, keep your head down and your sights high!

