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 in tact, regardless of any re-assignment 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 moneys.

1) Compute *Total Money* $\quad$ = $\quad$ Total Entries $\quad$ x $\quad$ Lewis Class Price
$\qquad$ $320 $\quad$ = $\qquad$ 32 $\qquad$ x $\qquad$ 10

2) Compute *Group Money* $\quad$ = $\quad$ Total Money $\quad$ / $\quad$ Number of Groups
$\qquad$ $64 $\qquad$ = $\qquad$ $320 $\qquad$ / $\qquad$ 5

3) Compute *Base Numbers* = $\quad$ Total Entries $\quad$ / $\quad$ Number of Groups
$\qquad$ 6.4 $\qquad$ = $\qquad$ 32 $\qquad$ / $\qquad$ 5

$\qquad$ Which Creates: $\quad$ *Whole Base Number = 6*
$\qquad$ $\qquad$ $\qquad$ *Remainder Base Number = 0.4*

$\qquad$ Now Compute: $\quad$ *Add Rest* $\quad$ = $\quad$ *(Remainder Base Number * 10) / 2*
$\qquad$ $\qquad$ $\qquad$ 2 $\qquad$ = $\qquad$ (0.4 * 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 <u>thru</u> Group 5 entry counter   <--This Example
- If *Add Rest* = 3, then Add 1 to Group 3 <u>thru</u> Group 5 entry counter
- If *Add Rest* = 4, then Add 1 to Group 2 <u>thru</u> Group 5 entry counter
    NOTE: The *Add Rest* variable will never be more than (*Number of Groups* - 1)
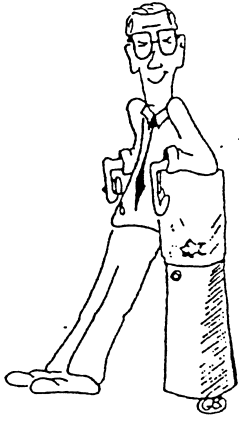
5) In our example, *Add Rest* was equal to 2, so the groups are now <u>originally</u> drawn with the following amount of Entries:

	Name	Score	
	Jim	100	
	Jan	99	
Group 1	John	99	
	Terry	98	
	Eric	96	
	<u>Susie</u>	<u>96</u>	(6 entries)
	Dolly	95	
	Mike	95	
Group 2	Sam	94	
	Dana	94	
	Joshua	93	
	<u>Janie</u>	<u>93</u>	(6 entries)
	Debbie	93	
	Lucy	92	
Group 3	Patty	92	
	Zelda	91	
	George	91	
	<u>Paul</u>	<u>90</u>	(6 entries)
	Rita	90	
	Ofelia	90	
	Pamela	90	
Group 4	Greg	89	
	Art	89	
	Olga	88	
	<u>Joseph</u>	<u>85</u>	(7 entries)
	Mary	85	
	Will	84	
	Lee	80	
Group 5	Renee	79	
	Jonathon	75	
	Lisa	74	
	<u>Bart</u>	<u>70</u>	(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 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	<<----- Note that Debbie headed 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	<<--- After Debbie moved to Group 2,
Group 3	Patty	92	Co-Winner Group 3 - $32.00	Lucy and Patty now head Group
	Zelda	91		Group 3 with 92's.
	George	91		
	Paul	90	Co-Winner Group 4 - $16.00	<<--- Paul moves from the bottom of
	Rita	90	Co-Winner Group 4 - $16.00	Group 3 to the head of Group 4
	Ofelia	90	Co-Winner Group 4 - $16.00	to join the majority of 90's
Group 4	Pamela	90	Co-Winner Group 4 - $16.00	
	Greg	89		
	Art	89		
	Olga	88		
	Joseph	85	Co-Winner Group 5 - $32.00	<<-- Joseph now heads Group 5. The
	Mary	85	Co-Winner Group 5 - $32.00	Rules state that if there is the
	Will	84		same number of alike scores,
	Lee	80		then Joseph moves down to
Group 5	Renee	79		head the next group.
	Jonathon	75		
	Lisa	74		
	Bart	70		

Meanwhile...Back at the Office

Purses And Options

By Eric Beckmann, NSSA Data Processing Manager

If you examine the entries of shooters throughout the world, you'll find that all shooters have different views concerning purses and options. Many clubs offer optional class purses, many are mandatory. Some clubs offer money pay outs with concurrent entries. Other clubs may require that places be determined through shootoffs or long runs... I'll not be discussing the politics of purses and options, but I will try to give you an overview so that you can make an informed decision for yourself.

A Few Words About "High Gun"

The High Gun system of purses was developed to make the payouts higher for the shooters who placed in the top end of r perspective class. You should always ιωɔk for the words "High Gun", because the other method (sometimes called the High Score system) is quite a bit different!

For example, if a program reads Optional Class Purse - Entry Fee: $10.00 - High Gun - 3 places (50/30/20) then the following situations may occur. If the top scores for purse entrants in class are 100, 99, and 98, then the 100 straight would take 50% of the money in class, the 99 would take 30% of the money, leaving 20% to the 98. If four shooters (in the same class) shot 100 straights then all three places to be paid have been satisfied and those four shooters would split the money evenly at 25% because the scores are tied. (See Figure 1 - Situation 2).

Similar to a shootoff, once the places to be paid have been satisfied, you must continue until a lower score is seen. What happens if you don't use the High Gun system? If it isn't used, then all of the high scores would evenly split 50% of the money, then the next highest scores would split 30% of the money, and then the next highest es after that would split the remaining ఎu% of the money. (See Figure 1 - Situation 3 for an example.) You end up with many more winners, but the payouts are decreased

substantially. Many gun clubs incorporate shootoffs if using the High Score system, but not if using the High Gun system. Regardless of which method you prefer, always ask shoot management if you have a question!

The Most Common Purses

The Class Purse is one of the most common purses and is one of the easiest to figure out. (See Figure 1). All class purse fees are accumulated and distributed by the number of splits printed in the program. If you know which payout method the shoot is offering, you should have no problem computing your share. The Oklahoma Options (or 50's) is another you'll see quite often. In this option, you group your rounds together in groups of 50 targets (See Figure 2).

Rounds 1 and 2 make your first group of 50, rounds 2 and 3 create your second group, and rounds 3 and 4 create your third group. After the groups have been computed, then the money allocated for that group of 50 (usually 1/3 of the Oklahoma entry fee) is split similar to the Class purse. Some clubs use four groups rather than the standard three - the fourth group of 50 being comprised of round 1 and round 4. The World Championships use groups of 100 in the 12 Gauge Main Event rather than 50 because it's based on the total 250 targets shot.

Another very common game is the Handicap Option. In this option, a handicap target amount (determined by a table) is added to your score with 100 being the maximum amount possible. After computations are complete, the high scores split the money. (See Figure 4 for an example.)

The Lewis Class Purse

This purse is very common, yet misunderstood by many. This purse does not use the NSSA 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 shooting 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 in tact 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.

There are many other purses/options such as the Rose System, The Ford Purse, and other sources of Added Money. 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! We'll do our best to answer any question you may have. Until then, keep your head down and your sights high!

Purse/Option Examples

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%)	(50% + 30% + 20%) are
Jim Quentin	100	$ 57.50	(25%)	consumed and evenly split
Kim Neeman	100	$ 57.50	(25%)	amongst the 100's.

The following example **IS NOT** figured using the High Gun System

Situation 3:

	Score	Payout	% Split	
John Dansforth	100	$115.00	(50%)	
Eric Johnson	99	$ 17.25	(7.5%)	
Jim Quentin	99	$ 17.25	(7.5%)	All 99's evenly split the 30%
Kim Neeman	99	$ 17.25	(7.5%)	portion of the money.
John McMahon	99	$ 17.25	(7.5%)	
Betty Hines	98	$ 46.00	(20%)	This lone 98 took the entire 20% place, thereby actually winning more than the 99's.

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

		Score	Payout	% Split
Class 1	Eric Johnson	100	$ 36.67	(50%)
	John Dansforth	99	$ 9.17	(12.5%)
	Kim Neeman	99	$ 9.17	(12.5%)
	Dave Johnson	99	$ 9.17	(12.5%)
	John McMahon	99	$ 9.17	(12.5%)
	Jim Quentin	98		
	Betty Hines	98		
	Beth Carter	98		
Class 2	John Allen	97	$ 24.45	(33%)
	Jane Foust	97	$ 24.45	(33%)
	Marc Davidson	97	$ 24.45	(33%)
	Jim Beckham	96		
Class 3	Judy McMahon	95	$ 18.34	(25%)
	Dana Nemeth	95	$ 18.34	(25%)
	Sam Mauer	95	$ 18.34	(25%)
	Bart McGregor	95	$ 18.34	(25%)
	Carl Hines	91		
	Diana Rosen	91		
	Mike Kenny	91		
	Dave Berner	90		
	Mark Riley	82		
	Debbie Radley	78		

Figure 2 - Oklahoma Options (50's)

High Gun - 2 places per class - Split 60/40

Class B - 7 entries (@ $15 ea) = $ 105.00 ($35 per group of 50)

		1st 50			2nd 50			3rd 50		
		Score	Payout	% Split	Score	Payout	% Split	Score	Payout	% Split
Allen, John	96	46			49	$ 4.67	13%	50	$21.00	60%
Beckham, 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 1st group of 50 targets, but not as well in the following groups of 50.

Figure 4 - Handicap Options Table

The following is an example of a Handicap Option Table which might be used. These values, according to your class, are added to your raw score. The maximum score is 100 with all money returned to high score. Ties will usually divide with no shootoffs necessary.

Class	.410	28	20	12
AAA	0	0	0	0
AA	4	2	2	1
A	7	3	3	2
B	9	5	4	3
C	11	7	5	4
D	13	9	6	5
E	-	-	-	6