Halo League Rules and Scoring

Rules

1. There shall be at least twelve Competition Days designated HALO League events. (As far as is possible, these should not clash with National Events (Level A) or Regional Events (Level B) accessible to HALO members or in which some members would be likely to participate.) An event will not usually be both a HALO League event and the HALO Championship event.

   For each competitor the lowest scores are discarded leaving a set of scores to be added together to give the total score. The size of the set is set by the HALO committee and is indicated for the current season on the League page on the HALO web site.

   Events to be published, in advance on the HALO website.

2. All HALO suitable format competitive regional or national events, forest colour coded and urban, should be included unless designated as the HALO Championship event. Other events should be YHOA Colour Coded or Urban events but in addition, there could be some competition days when there is an alternative event in another region which would enable those living in the more extreme parts of our region to participate in the HALO League with less travelling. These competition days are known as 'alternates' (previously 'doubleheaders'). When calculating points only the higher of a pair of alternates will qualify
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3. Planner/Controller of HALO events to be awarded the average of their scores for the event(s) where they officiate. (In the case of alternates, only the higher score will contribute towards the average).

4. Calculations to be based on speed/km (adjusted for climb) for a particular course. **Although there are still suggested courses based on age class, there is no longer a 10% bonus or penalty for deviating from the designated course**.

5. The only forest colour courses included in the League for the purposes of allocating colours to classes and eligible to be included in the points calculations are White, Yellow, Orange, Light Green, Very Short Green, Short Green, Green, Short Blue, Blue, Short Brown, Brown and Black.

   For urban events, if the event uses the new colour coded format the BO suggested courses will be adopted, otherwise the suggested courses will be those published by the planner/organiser of the event for the urban age

categories of Young Junior, Junior, Open, Veteran, Super Veteran, Ultra Veteran and Hyper Veteran..

6. Should an event be planned as a multi-stage event such as Prologue and Chase, it is to be scored by aggregating the length, climb and times of the courses required, provided that they are in a format where determination of the running speed is possible. Score events are thus not eligible.

7. Any event which has been included in the HALO League calendar, but for which it is subsequently found not possible to apply the scoring rules described herein will be excluded from the League. If possible to determine this before the event it will be noted on the HALO web site.

8. There will be a minimum points award of 500 to anyone completing a course but scoring less than that in any HALO League event.

9. Scores and HALO League table to be updated and published, when possible, after each event on the HALO website.

10. Awards to be in the following categories:
    - Overall Champion
    - Super Veterans (M/W60 +) – Harry Milton Trophy
    - Masters (M/W45 – M/W 55)
    - Senior (M/W21 – M/W40)
    - Junior (M/W20 -)

    To qualify for an award, competitors must compete in the required number of League events, (see Rule 1) during the season. Minor places will only be awarded if there are sufficient qualifying competitors to justify it.

11. As most of the league season takes place after the New Year, the category in which a competitor qualifies for an award, i.e. Junior, Senior or Veteran, will be determined from their age attained in the year the league finishes.

12. One individual may only win one award, either overall champion or an award within their own age category.

13. Only competitors who are HALO members at the time of an event may be allocated points for that event.

Scoring

Halo League points are calculated by comparing the actual time for a runner in an event with a par time value determined for the runner's age class, course run and the distance and climb of that course. For forest colour courses, Table 1 table shall be used to determine the suggested course to be run; for urban colour coded events Table 2 shall be used to determine the suggested course to be run and for other urban events it shall be the course designated by the planner/organiser of the event.

Firstly the effective course length is calculated as the actual length in Km to which is added the climb in meters divided by 100. For example a Blue course of 6.2Km with a climb of 50m gets an effective length of 6.2 + (50/100) = 6.7Km.

If the event is a Prologue and Chase or similar multi-stage event then the legs required for each age class will be added together (distance and climb) and the competitors' times will similarly be aggregated before applying the calculations.

Age class	Par spd	Colour	Age class	Par spd	Colour
M10	9.12	Yellow	W10	9.25	Yellow
M12	9.64	Orange	W12	10.89	Orange
M14	8.44	Lt Green	W14	10.38	Lt Green
M16	8.04	Blue	W16	10.07	Green
M18	7.50	Sh Brown	W18	9.64	Sh Blue
M20	7.34	Sh Brown	W20	9.51	Sh Blue
M21	6.75	Black	W21	8.23	Sh Brown
M35	7.34	Brown	W35	9.51	Blue
M40	7.58	Brown	W40	9.78	Blue
M45	7.85	Sh Brown	W45	10.07	Sh Blue
M50	8.23	Sh Brown	W50	10.71	Sh Blue
M55	8.77	Blue	W55	11.64	Green
M60	9.64	Blue	W60	12.74	Green
M65	10.55	Sh Blue	W65	14.06	Sh Green
M70	11.84	Green	W70	16.07	Sh Green
M75	13.50	Sh Green	W75	19.29	V Sh Green
M80	16.46	Sh Green	W80	24.11	V Sh Green
M85	21.09	Sh Green	W85	35.53	V Sh Green

Table 1. Forest colour coded orienteering suggested courses

Age class	Par spd	Colour	Age class	Par spd	Colour	Cat
M10	9.12	Yellow	W10	9.25	Yellow	YJ
M12	9.64	Yellow	W12	10.89	Yellow	YJ
M14	8.44	Lt Green	W14	10.38	Lt Green	J
M16	8.04	Lt Green	W16	10.07	Lt Green	J
M18	7.50	Black	W18	9.64	Brown	O
M20	7.34	Black	W20	9.51	Brown	O
M21	6.75	Black	W21	8.23	Brown	O
M35	7.34	Black	W35	9.51	Brown	O
M40	7.58	Brown	W40	9.78	Blue	V
M45	7.85	Brown	W45	10.07	Blue	V
M50	8.23	Brown	W50	10.71	Blue	V
M55	8.77	Blue	W55	11.64	Green	SV
M60	9.64	Blue	W60	12.74	Green	SV
M65	10.55	Green	W65	14.06	Sh Green	UV
M70	11.84	Green	W70	16.07	Sh Green	UV
M75	13.50	Sh Green	W75	19.29	V Sh Green	HV
M80	16.46	Sh Green	W80	24.11	V Sh Green	HV
M85	21.09	Sh Green	W85	35.53	V Sh Green	HV

Table 2. Urban colour coded orienteering suggested courses

A runner's par speed in m/Km is then determined from the tables.

The par time for the runner is then calculated as the product of the effective course length and the runner's par speed. For example an M65 would be expected to run a Green course with a par speed of 10.55 m/Km. If he ran up to the blue course example above, the par time would be calculated as 6.7 x 10.55 = 70.685. The par time is the time in minutes that the runner would be expected to take to complete the course.

To calculate the points, one hundred is added to the par time and the actual time in decimal minutes subtracted from the result. Thus a shorter time than the par time gives a higher score and vice versa. The points are then multiplied by ten to decrease the chances of a tie for a place at the end of the season.

If our hypothetical M65 ran the Blue course in 69 minutes and 28 seconds, we add 100 to the par time to get 170.685 and subtract the decimal time of 69.46667 minutes to get 101.21833 which is carried forward as 1012.1833.

A normalisation process is then performed by finding the average of the points scored by HALO competitors completing a course. If there are more than seven HALO competitors with scores then they are all reduced or increased by a factor that would bring the average to 1000.

The exception to this is when there are fewer than seven when the adjustment factor varies from no adjustment for 1 competitor to almost the full adjustment for 6 competitors. For further information, see below.

Finally the points are rounded to a whole number, and if a result is less than 500, it is set to 500, but a score of zero is recorded for failure to complete the course.

Appendix 1 – Source material

Changes to suggested colour courses

The source data for the new allocations of colours comes from the BO publication Rules of Orienteering v3.6 Dec 2016.

It should be noted that now that short courses are more common, they are now included in the set of suggested courses.

Changes to the par minutes/km values.

The par values have been changed to reflect the BO Rules of Orienteering v3.6 Dec 2016 values.
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Appendix 2 – Source material pre 2017/8

Changes to nominated colour courses

The source data for the new allocations of colours comes from the draft changes to the competition structure as published by the BOF. Specifically the BOF publication *Event Guidelines B: Regional & Local Cross Country Events, Issue 1.0 Effective January 2009 Draft* page 3, which shows the colour courses including the short courses, and the classes to which they should equate.

HALO has taken the decision to exclude short courses from the nominated courses. This is because it is felt that events chosen as HALO League events are unlikely to all offer the full selection of courses, and any method of picking the correct course to be taken as the nominated course is likely to lead to unnecessary complexity.

In spite of short courses not being included in the nominated courses, they may nevertheless be chosen as a running up or running down course. This is so that HALO members should have no limitations on which course to run imposed by HALO League rules.

Changes to the par minutes/km values.

The par values have been changed to reflect available published data on running speeds for various ages and gender. The following sources contain relevant data:

- BOF Event Guidelines for Badge Events draft B 2002 for BOF Rules 2003
- OASA (Orienteering Association of South Australia) Course Proformas, Club Information Manual Section 2.1 Updated 16th Feb 2008 (Table 1).
- Course Planning & Route Choice, A. Zissos, (Canada)

The ratios of speeds for different ages and gender for all three of these sources correspond very closely, and the actual figures were taken from the first source.

Normalisation exceptions

In the case that there is a low HALO attendance, the normalisation rules are relaxed. While the usual normalisation factor is calculated as 1000 / Average points, the dividend for between 1 and 6 participants is adjusted as follows:

        Dividend = (Average-1000) x f + 1000

where for participants from 1 to 6, f has the values 1, 0.6, 0.4, 0.25, 0.15, 0.07 respectively thus modifying it from the initial 1000.

This gives the full un-normalised points to a single HALO competitor, with an increasing amount of normalisation until full normalisation is applied for seven or more.

For Example:

Three competitors score 1039, 500 and 969 giving a total of 2508 and an average of 836. This would normally generate a normalisation factor of 1000/836 = 1.20. However since there are only three HALO scoring competitors, the dividend is reduced from 1000 to 934.2 using the formula:

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Dividend=((836-1000)x0.4)+1000=934.2
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So the new normalised factor is 934.2/836=1.117.

The scores are adjusted using this new factor to 1161, 558, and 1082 respectively. Note that in this case a minimum score has also been improved – however if the normalisation factor was less than one, the minimum of 500 would not be lowered to comply with the rules.

N.B the observant may see a striking similarity to the scores at Bank Foot 4/11/2012.

Amendments

2009

The rules have been amended to reflect the BOF Draft Event Structure for 2009. See Appendix 2 for details.

Committee meeting 11 May 2011

We have formalised the understanding that a HALO Championship event, even if a HALO event, cannot also be a League event.

Also changed at this time are Level 1 to Level A and Level 2 to Level B. "Local Event" has been changed to "Colour Coded event".

Committee meeting 13 September 2011

Changes for 2011/12 were decided regarding The Harry Milton Trophy, age classes, minimum number of events to qualify for a prize and prizes for minor places.

Committee meeting 15 November 2012.

The following changes were made for the 2012/13 season:

- Inclusion of urban events in to the HALO League.
- Normalisation of results to allow for different runnability, including a sliding scale for low HALO representation.
- Changing the par score from 100 to 1000 to reduce the likelihood of a tie.

Committee meeting 24 October 2013.

It was decided that with an increased number of events designated as League events for the 2013/14 season that the number of qualifying events should be raised from six to eight.

Other minor corrections to this document have been applied.

Committee meeting 21 August 2014.

Addition of wording to cover multi-stage events such as Prologue and Chase.
Removal of reference to the HALO News
Other minor clarifications.

Committee meeting 12 September 2017

Updating of running speed by age in accordance with the BO Rules of Orienteering v3.6 Dec 2016.
Updating of the expected courses to be run in accordance with BO Rules of Orienteering v3.6 Dec 2016.
Changing the default urban course designations and associated age categories in line with the BO Rules of Orienteering v3.6 Dec 2016.
Removing the 10% advantage for running up and 10% penalty for running down.
(The 2016/17 season has almost no significant change with or without the 10% rules).
This gives competitors more freedom to choose their course.