

# Enduro Basics

## Intro

The sport is based on riders attempting to maintain an exact schedule, regardless of the difficult terrain and conditions they may encounter. Checkpoints, where crews will mark the time of each rider's arrival, are located along the course. After the race, the score of each rider is calculated. The riders with the lowest number of penalty points are awarded trophies in their respective classes.

## Definitions

**Key Time** - The scheduled starting time and scheduled time of arrival at each check for a rider on row 00.

**Ground Mileage** - The actual Mileage traveled by a rider, which is the course Mileage minus any Resets.

**Free Zone** - *Timed* checkpoints, including Known Controls, cannot be located closer than 3.0 course miles apart. Therefore 3.0 course miles before, or 3.0 course miles after a *timed* checkpoint can be considered Free Zones. Similar Free Zones may apply to Gas Stops, usually with no *timed* checks closer than 2.0 course miles before, or 3.0 course miles after the Gas Stop.

**Reset** - A point along the course where the posted course Mileage is advanced to some greater number. This gives a rider on schedule a rest period equal to the amount of Reset divided by the miles between possibles. IE: A .60 reset@24MPH = 1 minute and 30 seconds. (See table on sheet 2)

**Reset to Zero** - A special Reset where the club has you adjust your mileage to 0.00.

This reset has 2 special notes:

- 1) It's instantaneous; there is NO time *inside* of a Reset to zero
- 2) In order to keep the time pure, they should be located on a *possible*.

IE: At 24MPH from the start (no speed changes) a reset to zero at 47.80 would throw all subsequent checks off by 30 seconds, since  $47.80@24MPH =$  a roll chart arrival time of 1 hour, 59 minutes & 30 seconds.

**LEAP** - In the early 1980's ICO coined the phrase "LEAP" to describe an instantaneous jump in mileage, with no time *inside*. It was used in our old PROII computer to handle speeds above 99MPH. Since that time several clubs have used LEAP's in their races, IE: 24.30 to 25.00. While we feel this is artificial, and not a pure enduro function, all of our instruments can correctly handle these with no problems. NOTE: In order to keep the time pure, the distance of the LEAP should be divisible by the distance between possibles. IE: A LEAP from 24.30 to 25.00 = .70 miles = 1 minute & 45 seconds. All subsequent checks would be off by 15 seconds.

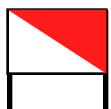
**Free Time** - All 3 terms refer to a point along the course where the Mileage remains fixed while the time is allowed to run. A rider on schedule would wait until the Free Time, PAUSE or Layover has run out, then he would proceed down the course. It has an effect very similar to a Reset.

**PAUSE**

**Layover**

## Checkpoints

Checkpoints are located along the course where crews will mark the minute, and seconds if an Emergency check, that a rider enters the check. The Key Time and the course Mileage for that check should be posted near the flags. The Mileage accuracy for the check location must be within .02 of a mile, while the clocks used at the check must be within 5 seconds of the master Key clock. The colors of the flags used to mark each check are shown in parenthesis.



**Secret** - (Red & White) An unknown, timed checkpoint.

**Emergency** - (Green & White) Same as a Secret check, except mins. *and* seconds are recorded.

**Known control** - (Yellow) A timed checkpoint whose location is known to all participants.

**Observation** - (White) An unknown, untimed checkpoint where no time penalty is recorded.

# AMA National Format

## Intro

In 2007 the AMA introduced a new Enduro format which incorporates multiple timed sections. These timed sections are linked by untimed “transfer sections” which participants will use to ride from one timed section to the next one.

## Timed sections

Each timed section begins with a RESTART and ends with a secret or emergency timed check. It is intended for riders to arrive at each RESTART before their row is scheduled to leave. However, the speed average and terrain of the timed sections will be such that *all* riders will be behind schedule at the timed check which ends the section. Standard enduro rules apply that timed checks, including RESTARTS, must be located where a whole tenth of a mile falls on a whole minute. (see next page)

## Resets

There will usually be RESETS at the end of each timed section. These will allow the riders to get back on schedule, or even ahead of schedule. ICO recommends that riders do not stop at RESETS, but rather ride through the Transfer section until they arrive at the next RESTART.

## Transfer sections

These are used to link the end of each timed section to the RESTART of the next timed section. There will be no timed checks in transfer sections, but they may have untimed Observation checks.

## Speed changes

In order to match the difficulty of the terrain, the club may use speed changes along the course.

## CheckMate XL

Our CheckMate XL has the capabilities to enter a race in the AMA National Format. During the race it will display where each RESTART and RESET are located, plus display how early or late the rider is in both test and transfer sections. Don't forget, if you arrive late at a RESTART you will lose points!



[CheckMate XL](#)

## Scoring

After the race, penalty points are computed based on the rider's variance from a perfect schedule.

**All checks** - EARLY: More than 15 minutes - disqualified from that point.

LATE: More than 60 minutes and 59 seconds - disqualified from that point.

**Secret** - EARLY: 2 points for the first minute, plus 5 points for each additional minute LATE: 1 point for each minute.

**Emergency** - The major points are computed like a Secret check, with Tie-breakers points placed after the major points. Tie-breaker points are the total number of seconds from the 30 second point of the rider's due minute.

**Known** - EARLY: Zero points for early up to 15 minutes, 2 points for each minute for an early departure.

LATE: 1 point for each minute.

## Possible Chart

To ease course layout and scoring, timed checks can only be located where a whole tenth of a mile falls on a whole minute. Below is the time and distance between possibles at each speed from 1 to 99 MPH.

MPH	MILES	MINUTES	MPH	MILES	MINUTES	MPH	MILES	MINUTES
1	.1	6	34	1.7	3	67	6.7	6
2	.1	3	35	3.5	6	68	3.4	3
3	.1	2	36	.6	1	69	2.3	2
4	.2	3	37	3.7	6	70	3.5	3
5	.5	6	38	1.9	3	71	7.1	6
6	.1	1	39	1.3	2	72	1.2	1
7	.7	6	40	2.0	3	73	7.3	6
8	.4	3	41	4.1	6	74	3.7	3
9	.3	2	42	.7	1	75	2.5	2
10	.5	3	43	4.3	6	76	3.8	3
11	1.1	6	44	2.2	3	77	7.7	6
12	.2	1	45	1.5	2	78	1.3	1
13	1.3	6	46	2.3	3	79	7.9	6
14	.7	3	47	4.7	6	80	4.0	3
15	.5	2	48	.8	1	81	2.7	2
16	.8	3	49	4.9	6	82	4.1	3
17	1.7	6	50	2.5	3	83	8.3	6
18	.3	1	51	1.7	2	84	1.4	1
19	1.9	6	52	2.6	3	85	8.5	6
20	1.0	3	53	5.3	6	86	4.3	3
21	.7	2	54	.9	1	87	2.9	2
22	1.1	3	55	5.5	6	88	4.4	3
23	2.3	6	56	2.8	3	89	8.9	6
24	.4	1	57	1.9	2	90	1.5	1
25	2.5	6	58	2.9	3	91	9.1	6
26	1.3	3	59	5.9	6	92	4.6	3
27	.9	2	60	1.0	1	93	3.1	2
28	1.4	3	61	6.1	6	94	4.7	3
29	2.9	6	62	3.1	3	95	9.5	6
30	.5	1	63	2.1	2	96	1.6	1
31	3.1	6	64	3.2	3	97	9.7	6
32	1.6	3	65	6.5	6	98	4.9	3
33	1.1	2	66	1.1	1	99	3.3	2

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