

## **TIME KEEPING BASICS**

By definition in the ECEA rule book an enduro is not a race; it is a time keeping event. Of course, we know that the winners are decided by who is fastest in the woods, but they don't win on sheer speed alone. The top riders are all excellent time keepers and know that riding a smart race can save valuable seconds, and even minutes, over the course of an enduro. It takes experience to master the skills of an expert time keeper, but knowledge of the basics is necessary to get started.

The goal of an enduro competitor is to ride the entire course maintaining the speed average set by the sponsoring club. Riders leave the start at a predetermined time in groups of four or five at one-minute intervals. The start time corresponds to the riders' number. For example, if you are #5A, you will start at 8:05 AM. Since the sponsoring club knows your start time and the speed average for the course, by doing a little math, they can determine precisely what time you should be at any specific location on the course. You will encounter checkpoints at various places along the course where your time will be recorded. Each checkpoint clock is synchronized with the start (keytime) clock so the time you are due at that point on the course is known and the time you actually arrive is recorded. Riders receive penalty points for each minute they are early or late to a check, one point for each minute late and 2 points for the first minute early, 5 points for each additional minute early. At the end of the day the winner is the person with the lowest accumulation of penalty points. Simple huh?

There are a number of rules governing checkpoint location and techniques and equipment you can use to assist with staying on time. Equipment ranges from sundials and yard sticks to super computers mounted on the handle bars. To this day Charlie Stapleford, Joe Gallie, Ed Baker, Jack Lafferty Sr. and many other old timers fondly remember the days of time keeping with a railroad watch. Before we delve further into time keeping equipment and techniques, a review of enduro lingo is necessary. The following is a list of terms definitions you should become familiar with.

**Key Time:** The official start time of an enduro, usually 8:00 AM. The sponsoring club will post a clock set to key time so all riders can synchronize their time keeping equipment. The entire enduro schedule is based on key time. All check clocks are set from key time.

**Start Control:** A known starting checkpoint for an enduro or a section of an enduro. Marked by a yellow flag with letters ST in black. Riders' times are recorded. No penalty points are accrued for being early, but points are awarded for being late. Riders leave a start control on the minute corresponding to their number.

**Known Control:** A known checkpoint on the enduro course, usually at a gas stop, or at the finish. Marked by a yellow flag with the letter K in black. There is no penalty for being up to 15 minutes early, but late points are accumulated. Arriving more than 15 minutes early results in disqualification.

**Secret Check:** An unknown checkpoint location on the course. Marked by a half red, half white flag with the letters ST in black. Riders are penalized for being early or late.

**Emergency Check:** An unknown checkpoint location on the course. Riders' times are recorded to the second. Optimum time to arrive is 30 seconds into the riders' minute. For example, if you are riding on minute 5, you want to arrive at the checkpoint at 5 minutes 30 seconds. Penalty seconds are calculated from the 30-second mark of your assigned minute. If you are on minute 5 and arrive at 7:09 you receive 99 penalty seconds. If you arrive at 5:25, you receive 5 penalty seconds. Early and late minutes are also accumulated. The seconds are used to break ties between riders with the same number of accumulated points at the end of the day. Emergency checks are marked by a half green, half white flag with a black letter E. All ECEA enduros have at least 2 emergency checks.

**Observation Check:** An unknown checkpoint location on the course to ensure that the course is not cut. No times are recorded. Observation checks are marked by a white flag with a black letter O.

**Free Time:** Points on the enduro course where checkpoints are not allowed.

**Gas Stop:** A refueling point on the enduro course. Timed checks are not permitted 2 miles before or 3 miles after a gas stop (free time). A known control may be at the gas stop.

**Gas Available:** A refueling point on the enduro course with no associated free time.

**Ground Mileage:** The actual number of miles ridden in an enduro.

**Reset:** A point on the enduro course where mileage increases but the rider does not move forward. This is used to give time back to the riders. For example: Reset from 50.0 to 55.0. When the rider reaches mile 50.0, he advances his odometer to mile 55.0, advancing 5 miles without moving.

**Route Sheet Mileage:** The mileage of an enduro including resets.

**Route Sheet:** A document describing an enduro course. Information provided includes speed averages, resets, refueling points, start control and known control locations, and major turn mileage and descriptions.

**Major Turn:** Sometimes called route sheet turn. These are points on the course indication a change in terrain or where more than one path can be taken. All major turns should be listed on the route sheet and the mileage posted at the corresponding location on the course. The following are examples of how turns are presented on the route sheet.

29.5 R TR (Mile 29.5, right trail)  
30.2 L WR (Mile 30.2, left woods road)

Those are the basic definitions you need to know. Now we will review the rules.

## **RULES**

The winner of an enduro is the rider who negotiates the course and accumulates the fewest number of penalty points (and seconds in the event of a tie). Points are accrued in the following manner: Every minute a rider is late to a timed checkpoint (Start Control, Known Control, Secret Check, Emergency Check) counts as 1 point. For example, if you are on minute 5 and arrive at a checkpoint on minute 9, you have 4 points. As previously stated, you receive 2 points for the first minute early, and 5 points for each minute earlier than that. So, arriving 3 minutes early (or “hot”) counts as 12 points. Note that hot points only count at Secret and Emergency Checks.

Timed check points may only be placed on whole tenths of a mile and on whole minutes. For example, at 24 mph you must cover 0.4 miles each minute to stay on time. Since checks must be on whole tenths and minutes, they can only occur every 0.4 miles. This leaves 0.3 miles free time between checks. If the speed average is 21 mph, you must cover 0.35 miles each minute to stay on time. But timed checkpoints must be on whole tenths and minutes. Therefore, at 21 mph timed checks may only be placed every 0.7 miles at 2-minute intervals. This translates to 0.6 miles free time between possible check locations. Other speed averages and possible check locations will be discussed later.

Timed checkpoints must be separated by at least 3 route sheet miles. This translates to 3 miles of free time between checks. The exception is a Start Control, which may have checkpoints within 3 miles before, but do have 3 miles free time after.

Observation checks may be placed anywhere on the course and there is **no** associated free time.

Gas stops have 2 miles free time before and 3 miles free time after. You may hear people say 2 in 3 out.

Gas availables have **no** associated free time.

There must be a refueling point, gas stop or available every 50 ground miles or less.

**Note that all free time mileages associated with checkpoint locations and gas stops are route sheet miles, not ground miles. Resets must be taken into account.**

Speed changes can only occur on whole tenths and whole minutes.

### **TIME KEEPING TIPS**

There are many methods and tools available today for time keeping. Back in the old days we used to use a watch, odometer and a roll chart, that we usually made ourselves. Today's rider has a variety of sophisticated computers and "pacers" available to ease the mental stress of doing math while dodging trees. As the sport developed guys tried many different contraptions to get an edge on the time keeping game. Check out this picture of my brother and this fancy device with a built in check alarm he concocted. There have been better and worse.



Many beginning riders start right away using an enduro computer. The older computers would constantly display the mileage where you should be, requiring only a quick comparison with the odometer to determine if you are on time. The newer computers available today integrate with your odometer and display how early or late you are in seconds (plus or minus). These systems greatly ease time keeping, but inhibit ones ability to learn the significance of speed averages and their available free time. I recommend that beginning riders start by using a clock, roll chart and odometer. This will enable you to master the subtleties of time keeping before graduating to a computer.

Learn where possible checks can be at various speed averages. Remember that checks may only be on whole tenths and whole minutes. The most common speed averages and possible check locations are:

6 mph	0.1 mile/min
12 mph	0.2 mile/min
18 mph	0.3 mile/min
24 mph	0.4 mile/min
30 mph	0.5 mile/min

Learn to read a route sheet and use it to anticipate where checks are likely to be placed. Most clubs will check you into and out of tough sections. Usually a check out will be placed immediately prior to a reset. Check ins can be anticipated as follows. Look for turns off of roads or dirt roads, where you know you will be on time, into long trail sections. The check in will usually be at the first possible location (whole tenth, whole minute) after the turn onto trail.

Learn to use all the available free time. For example, at 24 mph checks may only be placed every 0.4 miles. This translates to 0.3 miles free time, where you can ride hot, between checks. Make sure you get back on time before the check.

Leave gas stops early and ride out to 0.1 miles short of the first possible check. Remember, 2 in 3 out.

Try to come in to all check ins as close to the top of your minute (0-10 seconds) as possible. Seconds saved at the check in can save minutes at the check out. Keep in mind that some variation in the check clocks and mileage is allowed in the rulebook, and that your clock/odo may be in error compared to the equipment used to layout and time the event. You need to account for these variables to avoid being early, when you think you are on time.

Ride smart!! Remember, some trail bosses will try to trick you with the nuances of time keeping and may even resort to treachery to fool you. Use free time where it's available and be on time where you need to be.