Race Director Fact Sheet Number 9:

Race Timing and Results.

Even where chip timing (transponder) is used, the calibration of the winner's time should still be covered by a qualified timekeeper using a hand-held stopwatch. It is also good practice for the top men and women's results to be ratified by manual timing and recording, and many races will also provide a video back up to double check finishing places for leading finishers.

UKA Rules of Competition specify that an athlete's time and position will be taken when any part of the torso reaches the leading edge of the finish line. The time shall be read to the nearest 1/100th second. All times not ending in two zeros shall be converted to the next longer whole second e.g. for the marathon a time of 2h 09m 44.32secs shall be recorded as 2h 09m 45secs. However, for most races hand timing is undertaken to the nearest longer whole second.

When a chip timing system is used, the official time for published results under UKA Rules is normally that of the 'Gun Time' – ie the time taken by an athlete to complete the course from the moment the start 'gun' was sounded until he/she crosses the finish line. Chip Time results represent the time taken by an athlete to complete the course from the moment he/she crosses the start line to the time when he/she crosses the finish line – bearing in mind that at larger races it can often take an athlete a significant time to cross the start line after the 'gun' start. Published results often show both Gun and Chip Time results.

Hand Timed Finishes

When hand timing is used, a time recorder or recorders work with the timekeeper to record the times. Where a group of athletes cross the line together or in very close proximity, the timekeeper may give all runners the same time e.g. 'four at 15:23' In addition, time recorders will also insert a runners race number alongside their time to assist the results team by acting as a check mark.

Check numbers are also used to act as a guide for accuracy on the position of the athlete crossing the finish line and feeding through the funnel where his or her race number is recorded.

Funnel personnel are required to keep athletes in the same order as they crossed the line so that the number recorders can take accurate details, in finishing order.

Chip-timed Finishes

Chip timing should be calibrated against the winning time on the Chief Timekeeper's watch. The individual timing chips respond to a signal transmitted by transponder cables, usually positioned beneath rubber mats at the start and finish lines (and intermediate points if desired) on a road race course (and cross-country). The signal confirms a code which is linked to the runner's race number by the timing company.

The advantages of chip timing are:

- Enables high volumes of finishers to be processed swiftly across a wide finish line and chute, with easy access for the medical team.

- Results are fully automated and downloadable immediately after a finisher has crossed the finish line.

- By knowing exactly how many runners started the race, the race organisers will have an indication of how many are still to finish.
- By placing intermediate point mats on the course, the progress of individual runners can be tracked, and the race referee can be certain that the correct/full course was run.
- Because the chip timing device does not activate until the individual runner crosses the start and finish lines, they will get a 'net' personal time, even if they set off some minutes after the gun.
- This enables mass starts and wave or pulse start formats to be undertaken to spread out runners in the early stages of the race.
- Even though chip timing may be used, key race positions should be confirmed on a 'first pastthe post basis' by the Race Referee or Line Judge.
- Race Organisers may decide to award Age Group prizes on chip time but must clearly publicise in their entry form and pre-race details.

The current state of development and capabilities of chip timing devices include:

- A card, tag or toggle that threads into the runner's shoe laces and is generally removed in the finish funnel so that they can be re-used.
- A chip on a Velcro strap that goes around the runner's ankle. This type of chip is also usually recycled.
- Transponders embedded in the runner's bib number. This may well be an option as more sensitive transmission signals are used and thereby moves the chip away from foot level.

At present, there are a number of companies offering chip timing services. The larger races are better able to afford such costs on a per head basis, but the technology is becoming more affordable to medium and small-sized events. Some local authorities and groups of races have acquired the hardware to offer to more than one event on a cost-saving basis.

Race organisers should be aware that whilst modern chip timing systems are highly reliable, they are not completely infallible. Individual chips can fail, or timing mats fail to capture all competitors – particularly at mass starts (where double-timing mats are often used as backup). Runners may forget to wear their chips, or they may lose them during the race - particularly in poor weather conditions or rough terrain. Digital systems can also be affected by power or network failure or interference from other electronic or radio equipment. A 'failure' rate of 1-5% of 'lost' results is not uncommon for chip timing.

Gun to Mat timed finishes (ie finish line timing mats only)

As a cheaper alternative, or where there is limited time available for construction of infrastructure on the highway at the start of the race, some races use a gun to mat timing system whereby all runners' times are triggered by the sounding of the start gun or klaxon and stop when crossing the mat at the finish line which records the chip time. This approach is manually rather than electronically initiated. There should be documentary evidence of the times at which the timer manually initiated the system, and that cross checks are made soon after the start (not to wait for the first runner) to ensure the electronic timing systems are calibrated with the stop watch and that this is not only rechecked with the first runner but periodically thereafter and that all such checking is documented. This system is customarily used at cross country races.

Finish procedures

With chip-timed finishes using re-useable timing chips, once the runners have crossed the finish line they should continue to be marshalled through the finish zone to an appropriate area where the 'dechipping' process can be carried out. The chip timing company will provide advice on best practice in this area.

Funnel systems are not required for chip-timed finishes, where experienced marshals should be deployed to catch (prevent head trauma) and assist collapsing runners both forward of the finish line (at regular intervals along the finishing straight) and within the primary finish area. Most collapses (and fatalities) at road races occur in the finishing straight and primary finish area. A close working relationship with the medical team is essential.

Where manual timing is used, timekeepers and their recorders are stationed at the finish line and should aim to record individual times for such periods as agreed with the referee and race director. In most races, especially championships, it is customary to record manually the time and position of the leading runners e.g. the first one hundred men and women respectively. If the finish rate becomes too rapid, then they should then record times and running numbers of selected runners at appropriate intervals.

A separate side funnel is sometimes used to cater specifically for women runners, as long as they can be separated from the mass. This improves the speed of production of results for the women. A marshal/official ahead of the finish line needs to warn approaching women that they should go towards the correct funnel. This funnel will need its own timekeeper and recorders. Again chip timing means such an approach is not always needed.

Results

Race results from runbritain/UKA licensed races are used for Power of 10 and the runbritain handicap scheme. The information required for the system to store the results and assign performances to an individual automatically, is best provided as an Excel file as follows :

- Finishing position by gun time
- Bib number
- First name
- Surname
- Club
- Gender
- Age Category (we use 5-year bands for vets) / Age on the day
- Gun time*
- Chip time*

*Times should be rounded up as per UKA rule 165.24:

"For all races held partly or entirely outside the stadium, the time shall be read to 1/100th second. All times not ending in two zeros shall be converted to the next longer whole second, e.g. for the Marathon a time of 2h 09m 44.32s shall be recorded as 2h 09m 45s."29:22.000 would be 29:22 but 29:22.019 becomes 29:23.

Times should be shown as mm:ss digits upto 99:59 and from 1:40:00 onwards as h:mm:ss Any results marked provisional will be delayed. Please mark your results as final if they are ready to be published.